

# RAILWAY

AUG 21 1947

TRANSPORTATION LIBRARY

AUGUST 16, 1947

FOUNDED IN 1856

# AGE

more than

# 4,000,000

General Motors Diesel Horsepower  
in Railroad Service

3,238 GM DIESEL LOCOMOTIVES,  
4,190,800 HORSEPOWER — JULY 31, 1947

GOING UP AND UP

4,500,000 H. P.

4,000,000 H. P.

3,500,000 H. P.

3,000,000 H. P.

2,500,000 H. P.

2,000,000 H. P.

1,500,000 H. P.

1,000,000 H. P.

500,000 H. P.

0 H. P.

1934

1936

1938

1940

1942

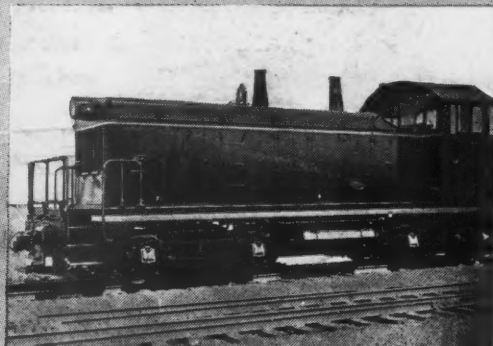
1944

1946

The experience gained in designing and building more than 4,000,000 horsepower in Diesel locomotives for more than 80 American railroads is unrivaled in the motive power field.



GENERAL MOTORS  
LOCOMOTIVES



## ELECTRO-MOTIVE DIVISION

GENERAL MOTORS

LA GRANGE, ILL.



## **Stainless— right from the word "go"**

"VERSATILE" is the word for Stainless Steel. On this modern Streamliner, as on so many of the nation's leading trains, you'll find this gleaming metal in everything from hand-rails and car doors to bulkheads and galley equipment.

Lustrous ARMCO Stainless has that clean-looking, attractive appearance passengers like. But more than that, it is strong, rustless and durable . . . assures long, economical service.

Even when exposed to the most severe conditions, the surface of ARMCO Stainless resists

corrosion. Cleaning is no problem either. Soap and water, or common cleaners, keep it looking smooth and presentable.

When you plan new trains or replacement parts, remember there is a special grade or finish of ARMCO Stainless Steel sheets, strip, bars and wire for every railroad need. For full information, get in touch with our nearest district office or write to: The American Rolling Mill Company, 268 Curtis Street, Middletown, Ohio. Export: The Armco International Corporation.



**THE AMERICAN ROLLING MILL COMPANY**

• SPECIAL-PURPOSE SHEET STEELS

• STAINLESS STEEL SHEETS, STRIP, BARS AND WIRE

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price \$6.00 for one year U. S. and Canada. Single copies, 50 cents each. Vol. 123, No. 7.

# Railway Age

With which are incorporated the Railway Review, the Railway Gazette,  
and the Railway-Age Gazette. Name registered in U. S. Patent Office.

Vol. 123

August 16, 1947

No. 7

PUBLISHED EACH SATURDAY  
BY THE SIMMONS-BOARDMAN  
PUBLISHING CORPORATION, 1309  
NOBLE STREET, PHILADELPHIA  
23, PA., WITH EDITORIAL AND  
EXECUTIVE OFFICES AT 30  
CHURCH STREET, NEW YORK 7,  
N. Y., AND 105 W. ADAMS STREET,  
CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1031 NA-  
TIONAL PRESS BUILDING—  
CLEVELAND 13, TERMINAL  
TOWER—SEATTLE 1: 1033 HENRY  
BUILDING—SAN FRANCISCO 4:  
300 MONTGOMERY STREET,  
ROOMS 805-806—LOS ANGELES 14:  
530 WEST 6th STREET—DALLAS  
4: 2909 MAPLE AVENUE.

SAMUEL O. DUNN, CHAIRMAN.  
JAMES G. LYNE, VICE-PRESI-  
DENT—ASSISTANT TO CHAIR-  
MAN. HENRY LEE, PRESIDENT.  
ROY V. WRIGHT, VICE-PRESI-  
DENT AND SECRETARY. C. MILES  
BURPÉE, F. H. THOMPSON. F. C.  
KOCH, R. E. THAYER, H. E. Mc-  
CANDLESS, S. WAYNE HICKEY,  
VICE-PRESIDENTS. J. T. DeMOTT,  
TREASURER. RALPH E. WESTER-  
MAN, ARTHUR J. McGINNIS, AS-  
SISTANT TREASURERS.

SAMUEL O. DUNN, EDITOR.  
JAMES G. LYNE, ASS'T TO EDI-  
TOR. ROY V. WRIGHT, MANAG-  
ING EDITOR. C. B. TAVENNER,  
ASS'T MANAGING EDITOR. NEAL  
D. HOWARD, WESTERN EDITOR.  
C. B. PECK, ALFRED G. OEHLE,  
E. L. WOODWARD, J. H. DUNN,  
H. C. WILCOX, CHARLES LAYNG,  
WALTER J. TAFT, M. H. DICK, W.  
H. SCHMIDT, JR., C. L. COMBES,  
MAURICE PEACOCK, FRED W.  
SMITH, SHERMAN DAVIS, FRED  
C. MILES, WALTER L. TURNER,  
JR., G. J. WEIHOFEN, GEORGE  
JOHNSON, HENRY E. MICHAEL,  
ROBERT G. LEWIS, LIBRARIAN:  
EDITH C. STONE, EDITORIAL AS-  
SISTANT: ELAINE C. FARRAR.  
C. MILES BURPÉE, BUSINESS  
MANAGER.

SUBSCRIPTIONS INCLUDING 52  
REGULAR WEEKLY ISSUES, AND  
SPECIAL DAILY EDITIONS PUB-  
LISHED FROM TIME TO TIME IN  
NEW YORK OR IN PLACES OTHER  
THAN NEW YORK, PAYABLE IN  
ADVANCE AND POSTAGE FREE.  
UNITED STATES, U. S. POSSES-  
SIONS AND CANADA: 1 YEAR,  
\$6.00; 2 YEARS, \$10.00; OTHER  
COUNTRIES, NOT INCLUDING  
DAILY EDITIONS: IN WESTERN  
HEMISPHERE 1 YEAR \$10.00; 2  
YEARS \$16.00; OTHER COUNTRIES  
1 YEAR \$15.00; 2 YEARS \$25.00.  
SINGLE COPIES, 50 CENTS EACH.  
H. E. McCANDLESS, CIRCULA-  
TION MANAGER, 30 CHURCH  
STREET, NEW YORK 7.

## In This Issue

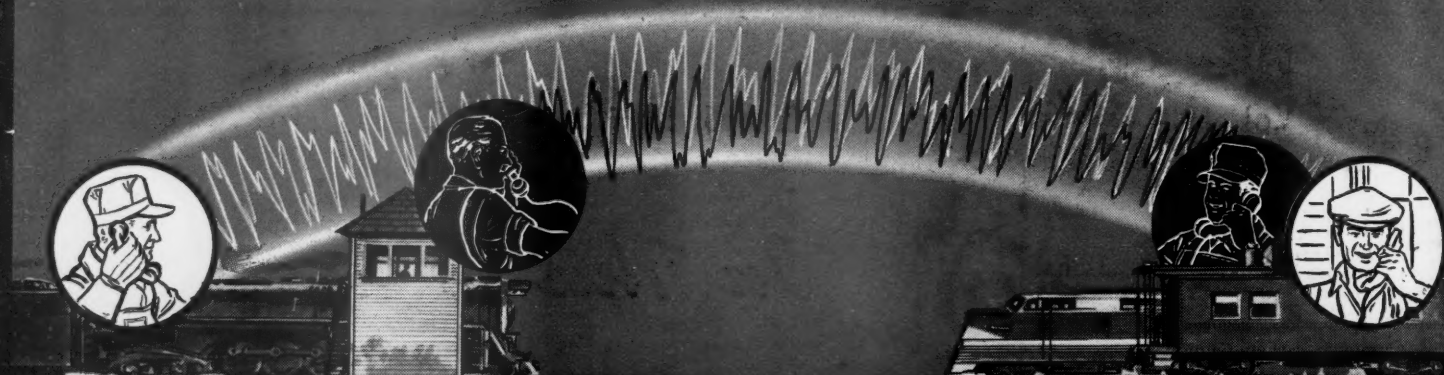
	Page
<b>De Luxe Service on a 117-Mile Route</b> .....	46
The coaches of the Central of Georgia "Man o' War" have roomy lounges. The tavern-observation car provides light meal service.	
<b>Great Northern Installs High-Capacity Electric Loco- motives</b> .....	53
Two 11,000-volt single-cab units, in service on electrified division, develop continuous traction rating of 119,000 lb.	
<b>Tie Renewals Slump 14.4 Per Cent</b> .....	59
Data reported by A.R.E.A. show decreased replacements in 1946 compared with previous year because of adverse factors that included a shortage of labor and the necessity of retrenching.	
<b>EDITORIALS</b>	
Pushing Transportation Further into Socialism .....	43
Economizing Man-Hours .....	44
Too Much Fixed Property .....	45
The Importance of Being Considered Important .....	45
<b>GENERAL ARTICLES</b>	
De Luxe Service on a 117-Mile Route .....	46
Seaboard Speeds Trains with Photographic Copying .....	51
1946 Railroad Construction Indices .....	52
Great Northern Installs High-Capacity Electric Locomotives, by D. R. MacLeod .....	53
European Railway and General Conditions Badly Scrambled, by Fred A. Poor .....	58
Tie Renewals Slump 14.4 Per Cent .....	59
Erie Cuts Tops Off Hills with Diesels .....	62
Railroad Earnings Analyzed in Latest "Monthly Comment" .....	65
<b>NEW BOOKS</b> .....	64
<b>NEW DEVICE</b> .....	66
<b>GENERAL NEWS</b> .....	67

Railway Age is a member of Associated Business Papers (A. B. P.) and Audit  
Bureau of Circulation (A. B. C.), and is indexed by the Industrial Arts Index  
and by the Engineering Index Service.



PRINTED IN U. S. A.

# Not just **TWO-WAY** but also **TWO-CHANNEL**



## TRAIN COMMUNICATION

To the many advantages of two-way voice communication between your enginemen, conductors, and wayside station operators, "Union" Inductive Train Communication adds the two-channel feature.

With two-channel I.T.C., either of two entirely separate voice channels is instantly available to the user by merely flipping a selector lever. One channel may be used for regular communications and the other reserved for emer-

gency service—to break into conversation on the regular channel at any time. Or, you may assign each of the channels to specific services. In areas where communications traffic is heavy, it can double the capacity of your railroad's communication system.

Our representatives will gladly give you full information on this two-channel (two-frequency) communication system. Write or call the nearest "Union" district sales office.

### "UNION" I. T. C.

THE VOICE OF EXPERIENCE IN TRAIN COMMUNICATION

## UNION SWITCH & SIGNAL COMPANY

SWISSVALE  
NEW YORK CHICAGO



PENNSYLVANIA  
ST. LOUIS SAN FRANCISCO

GO  
costs  
direc  
the  
ing  
the  
Am  
know  
so th  
reson  
uate  
nomi  
in th  
inves  
fixed  
trans  
point  
ment  
pipel  
fair  
form  
this  
whic  
has  
quate  
econ

—A  
gover  
along  
miles  
super  
with  
roads  
factu  
leadi  
vate  
socia  
own  
a dut  
in tra  
by le

POV  
of the  
matic  
exist  
cross  
ton,  
on a  
longe  
The  
which  
have  
tracti  
cordi  
passe  
other  
techn  
includ  
circu  
page

DAT  
annua  
for th  
Here  
light  
quate  
their  
ditur  
roads  
result  
labor

# The Week at a Glance

**GOING SOCIALIST—:** Collecting the costs of providing any service from the direct beneficiary of that service is one of the basic principles of capitalism. Spreading those costs over all the people is one of the basic principles of socialism. When the American people get a chance to vote knowingly for socialism they turn it down, so the proponents of the socialistic system resort to the process of infiltration to insinuate collectivism into the American economic structure. This process has gone far in the transportation industry, where the investment of government money in the fixed facilities of highway, air and water transportation, as our leading editorial points out, substantially exceeds the investment of private capital in the railroads and pipelines. The result, of course, is an unfair competitive advantage favoring those forms of transportation that benefit from this socialist invasion of an industry in which private enterprise, in the railroads, has proved its ability, to provide fully adequate service with the greatest absolute economy.

**—AND GOING FARTHER:** Now the government's road building agency comes along with a super-costly plan for 39,000 miles of toll-free superhighways on which super-trucks can run at will in competition with the tax-paying, self-supporting railroads. And the powerful automobile manufacturing industry, including in its ranks leading advocates of the principles of private enterprise economy, welcomes this socialist proposal. The railroads, in their own interest and in the public interest, have a duty to oppose the spread of collectivism in transportation, a duty they can perform by letting the public know what is going on.

**POWER MASTER:** The potentialities of the straight electric locomotive are dramatically revealed under such conditions as exist on the Great Northern's main-line crossing of the Cascade range in Washington, where heavy trains have to be handled on a 2.2 per cent grade and through the longest railroad tunnel this side of the Alps. The new General Electric locomotives which this road has added to its roster have a continuous rating of 119,000 lb. tractive force at 15.75 m.p.h., which, according to G. E.'s D. R. MacLeod, surpasses, at that speed, the power of any other single-cab engine. An illustrated technical description of the new power, including an explanation of the control circuits and their operation, appears on page 53.

**DATA ON RETRENCHMENT:** The annual summary of tie renewal figures for the Class I roads appears on page 59. Here as in other statistics now coming to light is clearly shown the influence of inadequate railroad earnings on the volume of their maintenance and improvement expenditures. Last summer, of course, the railroads collectively were in the red, as the result of greatly increased material and labor costs, facilitated if not inspired by

government actions, in the face of which the Interstate Commerce Commission was dealing with the carriers' rate increase proposals with unconscionable procrastination. And last year crosstie renewals were 14.4 per cent under 1945, being with one exception the smallest of any year on record. No post-graduate course in logic is required to trace effect to cause in this instance.

**LINE LEVELERS:** An unusual opportunity for the Diesel-electric locomotive to demonstrate its advantages occurs on the Erie, where a 203-mile segment of the main line was a bottleneck with former operating practices proportioned to the available steam power. As explained in the descriptive article in this issue, this segment—extending from Marion, Ohio, to Meadville, Pa.—is characterized by a sawtooth profile formed by grades that so limited the length of steam-powered freight trains that one train entering on this stretch of the line had to be split into two trains to get over it decently. Since 5,400-hp. Electro-Motive Diesels have been in use it has been possible to run the full-length trains straight through this difficult territory, thus speeding operations and reducing costs. At the same time, as our article points out, locomotive maintenance expenditures and car wheel changes have been cut materially.

**FAST OFFICE WORK:** The Seaboard Air Line saw no good reason why a train of perishables or other high class freight ready to move from its yard to a connecting line should have to sit waiting for the bookkeepers to get through their routine paper work. An article herein (page 51) explains how that road, with an installation of Remington-Rand photographic copying equipment, has so speeded up the process of waybill copying and preparing interchange reports that a 75-car train can be released in a few minutes instead of being held an hour or more for the old hand-copying operations to be completed.

**OMINOUS TIDINGS:** The report—summarized in this issue on page 58—of the observations of Fred A. Poor on his recent European trip confirm the impression formed here from the British journals that there is nothing in the performance or physical condition of the British railroads to justify so drastic and risky a step as their nationalization. Nevertheless they are being nationalized, and Mr. Poor sees no likelihood that the Labor party—which has forced this dangerous measure on a citizenry more hopeful of enjoying the imagined blessings of socialistic cure-alls than it is alert to the sacrifices of personal independence and opportunity they entail—will lose its hold on the government before the next national election is due. Even in the crisis in British affairs over which their political leaders are currently perturbed the totalitarians are proceeding with determination to eliminate private ownership of business.

**CAUGHT IN THE ACT:** Those writers and politicians who faithfully genuflect to the railroad brotherhoods—hailing them as invariably conservative, law-abiding, ably-led organizations—now have an opportunity to do a little explaining. According to one of President Truman's "fact finding" boards, the recent strike of Southern Pacific engineers was an "open violation" of the much-praised Railway Labor Act. Details of the board's findings appear in the news.

**IN THE KNOW:** Railroad managements quite properly expect their employees, particularly those in supervisory positions, to carry their loyalty to the road to the extent of being boosters for it in their own neighborhoods and among their own associates. An editorial comments on the obligation of managements to keep these employees properly informed about developments that will be of concern to them and their communities, so that they will feel that they are a part of the organization, that they are on the "inside" in knowledge about its affairs. If these employees get their first word of future plans or current happenings from the newspapers or other outside sources rather than from appropriate company channels, a perfectly natural human resentment at being left out of touch with matters their neighbors expect them to know about inevitably will color their feelings about their jobs and their railroads. A little planning to make certain that these employees are made to feel they are a part of the organization will help in securing the teamwork on which its best performance depends.

**"MAN O' WAR" CARS:** The historic admiration of Southerners for fine horses finds expression in the names applied by the Central of Georgia to its two new streamliners. One of these, the four-car "Man o' War" now in double daily round trip service between Columbus, Ga., and Atlanta, is the subject of an illustrated descriptive article this week. The A. C. F.-built cars are distinguished by luxurious appointments, roomy lounges, harmonious decorations and carefully engineered provisions for comfortable lighting for day or night travel. Equal attention has been given, of course, to the creation of sturdy and durable car structures, to the insulation and apparatus for heating and cooling and all of the other important adjuncts which—though they may not show—contribute to the satisfaction that passengers find in riding in modern railroad cars.

**BRIEFLY NOTED:** The I. C. C. "Monthly Comment" comes along with late figures on railroad revenues, showing again that Official-territory roads aren't doing so well, relatively, as those in other sections. . . . The commission's traffic bureau head recommends approval of the express rate increase. . . . Robert R. Young wants California-Chicago freight schedules speeded up. . . . The wartime "panel" for "emergency" boards has been abolished.

From a 1900 Code Book, an Okonite tape customer, Mr. R. J. McGinnis, tore out the advertisement shown (below at left) and sent it to us. Mr. McGinnis, of the Electric Service department of a large state university in the Midwest, wrote us that "the attached sheet will be of interest to your associates, especially the oldsters. It just goes to prove that a fine piece of quality merchandise lives on its merits and the service it delivers. Price is forgotten but quality remains for many years. Okonite and Manson Tapes have been on our shelves and in use on the campus for years. Needless to say, we expect to continue its use for a very good reason."

To this, we at Okonite have little to add other than showing a recent advertisement "Submerged for 13 Years and Still Good." We show this not so much for contrast as to give evidence that we are not taking leadership for granted but are making every effort to increase the service life expectancy of Okonite and Manson Tapes, which are described in Bulletin OK-1007, a copy of which is yours for the writing. The Okonite Company, Passaic, New Jersey.

**AN  
OKONITE  
TAPE  
USER  
WROTE  
THIS  
ADVERTISEMENT!**



1889  
PARIS EXPOSITION MEDAL  
FOR RUBBER INSULATION.

1893  
WORLD'S FAIR MEDAL  
FOR RUBBER INSULATION.

**THE STANDARD  
FOR  
RUBBER INSULATION**

SOLE MANUFACTURERS OF

Okonite Wires,  
Okonite Tape,  
Manson Tape,  
Candee Weatherproof Wires.

**THE OKONITE CO., Ltd.,**  
253 Broadway, N. Y.

WILLARD L. CANDER, Manager.  
H. DURANT CHEEVER, Asst. Mgr.  
GEO. T. MANSON, General Supt.  
W. H. HODGINS, Secretary.

*And we still use it. It's a new  
good product. R. J. McGinnis*



**SUBMERGED FOR 13 YEARS  
AND STILL GOOD!**

**...isn't this the kind of splice  
you'd like to make?**

This photograph shows one of several splices protected with Okonite and Manson Tapes after removal from test following 13 years immersion in water.

The story of this long-time test explains the confidence placed by electrical men in Okonite and Manson Tapes especially for splicing and tapping underground cables installed in wet locations — such as non-leaded rubber-insulated network cables and power feeders.

Each year all of these splices, made on 4/0 test at 7000 volts a-c for five minutes. Insulation megohms when the splices were removed for examination. Such prolonged immersion had not affected the electrical strength.

Dissection showed that the Okonite splicing compound was securely bonded to the connector and conductors and had become vulcanized into a firm, homogeneous seal that not one drop of water had penetrated. That's why so many experienced users say that for long, trouble-free service there's nothing like Okonite Rubber and Manson Friction Tape for splicing rubber-insulated cables.

We'd like to show you how easy it is to make joints like these. Just drop us a note on your company letterhead and ask for Bulletin OK-1007 and samples of these high-grade splicing tapes. The Okonite Company, Passaic, N. J.

**SPECIFY  
OKONITE and MANSON TAPES**



**OKONITE**



**and MANSON TAPES**

# RAILWAY AGE

## *Pushing Transportation Further into Socialism*

Why should the government be planning now greatly to increase its subsidization of other carriers with the taxpayers' money, while it is loading the railways down with taxes and not permitting them to make anywhere near adequate net earnings? It is to the *railways* that the public is offering a larger freight traffic than they can handle, although they are handling 50 per cent more than in 1929. Consequently, the *railways* are the means of transportation in which the national welfare requires that a large investment for improvements and expansion shall be made. Nobody has proposed that any part of the capital that should be invested in the railways shall be provided by the taxpayers. If it is to be raised and invested, the railways must be allowed to make enough net earnings to enable them to raise it. Under government regulation, they have not been earning enough for this purpose and are not now. In the first half of 1947, while handling 50 per cent *more* traffic than in 1929, they made 34.5 per cent *less* net operating income.

### **Super-Spending Program**

And now comes the Federal Works Agency with an announcement that it has approved construction of a 39,000-mile system of inter-regional superhighways with the taxpayers' money, and with no change in the present system of payment for the use of highways, which means that all commercial users of the highways by bus and truck in competition with the railways will be subsidized more than they ever have been. The defeat of the New Dealers in 1946 was considered a victory for private enterprise. When did government policy favor private enterprise by denying to an entirely private enterprise industry such as the railways enough net earnings and by pouring out billions of the taxpayers' money to subsidize competition with it.

This issue is not going to be made any easier to meet by delay in meeting it. Will the railways meet it? Or

will they, instead, delay facing the unpleasant facts until truck operators have taken away much more of their profitable traffic and acquired a vested interest in toll-free superhighways between all important population centers?

The facts are indisputable, and no one can deny the fundamental issue that they pose. The nation has five agencies of domestic transportation—railroads, pipelines, waterways, highways and airways. Only the railroads and pipelines are wholly privately owned and entirely dependent on revenues derived from their customers for services rendered them. The three remaining forms of transportation use property owned by government which is tax-free, and on the investment in which no return is earned or paid.

### **Low Charges Don't Mean Low Costs**

Efficiency in transportation, from the standpoint of the public interest, requires that each transportation agency concentrate on the types of movement for which it provides the best and *most economical* service, and that no agency inflate the total cost of transportation to the public by invading the area of service in which another agency excels. Division of traffic among the several agencies is not now determined, however, by the comparative intrinsic *economy* of each agency—but by *comparative rates*. Railroad rates, to be remunerative, must be burdened—relatively to those charged by highway, waterway, and air carriers—with all capital and maintenance charges, plus *ad valorem* taxes on fixed property—while rates for transportation by highways, waterway and air can be made less than actual costs by the amount of the contribution of taxpayers to the cost of government-owned transportation plant.

Government-owned transportation plant, in other words, is financed by a method which is a complete perversion of the method customary and necessary to

• self-sustaining private enterprise. Private enterprise is thereby placed at a great and arbitrary disadvantage in competing with government-owned facilities. The privately-owned railroads have labored under this handicap ever since the 1920's when government outlays on transportation plant first began to run into big money. The handicap has become increasingly oppressive as these government expenditures have become larger and larger, and as almost no progress has been made in applying a system of charges for the use of government-owned transportation plant which would (1) assure that the rates of carriers using this plant would include all the actual costs of the service rendered by them, and (2) enable private capital to compete with this government plant on equal terms.

### What Could Easily Happen

It may be difficult for some railroad officers and employees to appreciate the danger which confronts them when at present they have more traffic than they can handle. But if the present volume of industrial production should decline 15 per cent or more, the railroads would immediately suffer from idle facilities and a ruinous decline of present inadequate net earnings. The threat of the early construction of a nationwide system of superhighways (i.e., highways with multiple lanes, easy grades and no intersections—even in the middle of cities), and with no charges for the commercial use of these superior roads larger than those levied now, is most serious.

This system of inter-regional superhighways was designed to use general tax funds to give trucks an opportunity to divert additional traffic from the railroads. It was conceived for that purpose by the Public Roads Administration—doubtless with the collaboration of truck operators and manufacturers. Let's look at the record.

The Roads Administration in its "Toll Roads and Free Roads" report (1939) gave statistics to show that an overwhelming majority of highway traffic is very short-haul in character. This fact was used by the Roads Administration to arrive at its opinion that *long-haul superhighways could not be made self-sustaining by the collection of tolls*, which was sufficient demonstration that these roads are not economically justifiable. Nevertheless, they are going to be built anyhow—exclusively between centers of population, which is the traffic area where the railroads derive most of their revenue and where their service is at its best.

Where free-enterprise economic principles hold sway, if people do not want goods or services keenly enough to pay the cost of providing them, the goods and services are not produced. The railroads will not build a new line or bridge unless they can foresee revenues forthcoming to pay the capital, maintenance and tax charges on the proposed improvements. But the socialist economic theory under which the Public Roads Administration operates leads to a different conclusion. The Roads Administration gave its opinion that these superhighways were needed and should be built even though tolls could not be collected in sufficient amount to pay for them. How can the railroads, with no resources except those originating in charges collected from customers, hope to compete in modernity of fixed

plant with a socialist rival which goes ahead and makes improvements that users not only do not pay for, but which, according to the government's own estimates, they would not use in remunerative volume if required to pay?

This kind of screw-ball economics would not be dangerous if it were merely the daydreaming of academic bureaucrats. But the screw-ball economics of the Public Roads Administration is the guiding *credo* of what is perhaps the most powerful bloc of manufacturing interests in the country—i.e., those directly interested in automotive transportation. For example, Paul G. Hoffman, the motor car manufacturer who has done such great educational work in behalf of private enterprise as the chairman of the Committee for Economic Development, is, nevertheless, an active supporter of practically unlimited expenditures of tax funds on highway construction, and opposes self-financing of such facilities by the collection of tolls.

### More Preaching Than Practicing

The same is true of the National Highway Users Conference, which includes a wide range of manufacturing interests in its membership, all of them ardent for "free enterprise." This Conference opposes tolls on the highways—despite the fact that collecting costs from the direct beneficiary is an essential tenet of capitalism, while spreading them over all of the people is a specific doctrine of socialism. The Conference wants federal expenditures on highways increased, but insists on the termination of federal excise taxes on highway transportation—i.e., the Conference wants to proceed still further with the socialization of transportation costs.

The American people do not realize that the fixed plant of transportation already is much more socialist than capitalist. That is, omitting vehicles, the government investment in transportation (highways, waterways, airports) is much larger than the private investment in pipelines and railroads. A recent study by the Twentieth Century Fund reported that annual governmental capital expenditures on fixed transportation plant in the decade before the war averaged \$1 billion, while investment of private capital in comparable facilities averaged less than one-third as much.

Maybe the American people want to keep on going more socialist, but their expression on that issue whenever it has been squarely presented to them does not so indicate. The railroads have a duty to the public interest, as much as to themselves, to let the public know what is going on in transportation, lest the whole business be captured by collectivism before the public realizes what is happening.

### Economizing Man-Hours

In discussing the rising costs of equipment maintenance in this space two weeks ago the conclusion was reached that management "can scarcely do otherwise than move to eliminate enough man-hours by efficient methods and modern facilities to keep costs under such control as will assure solvency." A good

example of the elimination of man-hours by changes in methods and facilities is the eight-to-one reduction in man-hours accomplished recently in a flue shop of the Baltimore & Ohio. Before making these changes 120 man-hours were needed to recondition a set of 232 tubes and 53 flues. Now, only 15 man-hours are required to perform exactly the same work.

How was this done? First, by a new layout of the entire shop and the installation of a conveying system with automatic controls. Second, by the acquisition of a flue-cleaning machine that replaced the obsolete and noisy—obnoxiously so—flue rattler and the application of automatic features to four of the six principal machine tools. The first change did away with manual handling almost entirely; the second reduced machine-tool operators from six to two.

Where results like these can be obtained it would seem that the railroads cannot afford to neglect to make improvements in shop and terminal methods and facilities.

## Too Much Fixed Property

With both steam and Diesel locomotives in service, the railroads run some danger of tying up a lot of money and property in maintaining two kinds of locomotive repair facilities—one for steam and another for the Diesels. Installations for the servicing and maintenance of steam power, however adequate they may be for their original purpose, are not suited to the needs of the Diesels—so additional facilities are required. Moreover, unless Dieselization is complete, many of the existing steam facilities must be kept in service. These circumstances could force property investment and maintenance costs much too high unless steam installations are made over to care for Diesel equipment, or unless plant for steam locomotive maintenance is reduced in proportion as the need for it declines.

This latter alternative offers the major opportunity for holding down the property inventory to reasonable limits. Already many old enginehouses, water stations and cinder and coaling plants have been taken out of service, particularly at terminals which have been fully Dieselized. This process will continue as full Dieselization spreads to additional territories. There is certainly no reason for retaining and maintaining property after it has ceased to serve a useful purpose.

The depression of the Thirties was a disaster with little to commend it. But, anyhow, conditions in those years did provide an incentive which led the railroads to comb their properties for unused or little-needed facilities. Such installations were demolished—reducing tax assessments, insurance premiums and maintenance costs, and generally improving the physical appearance of the railroads. The industry was well rid of this overload of unneeded buildings and other plant, which was unsightly as well as wasteful.

The transition now taking place from steam to Diesel power could easily bring a return of expensive surplus plant, unless the desirability of getting rid of properties no longer needed is kept constantly in mind.

Fixed plant should parallel the need which rolling stock makes upon it: Too much fixed property is as inconsonant as too little with the goal of economical operation.

## The Importance of Being Considered Important

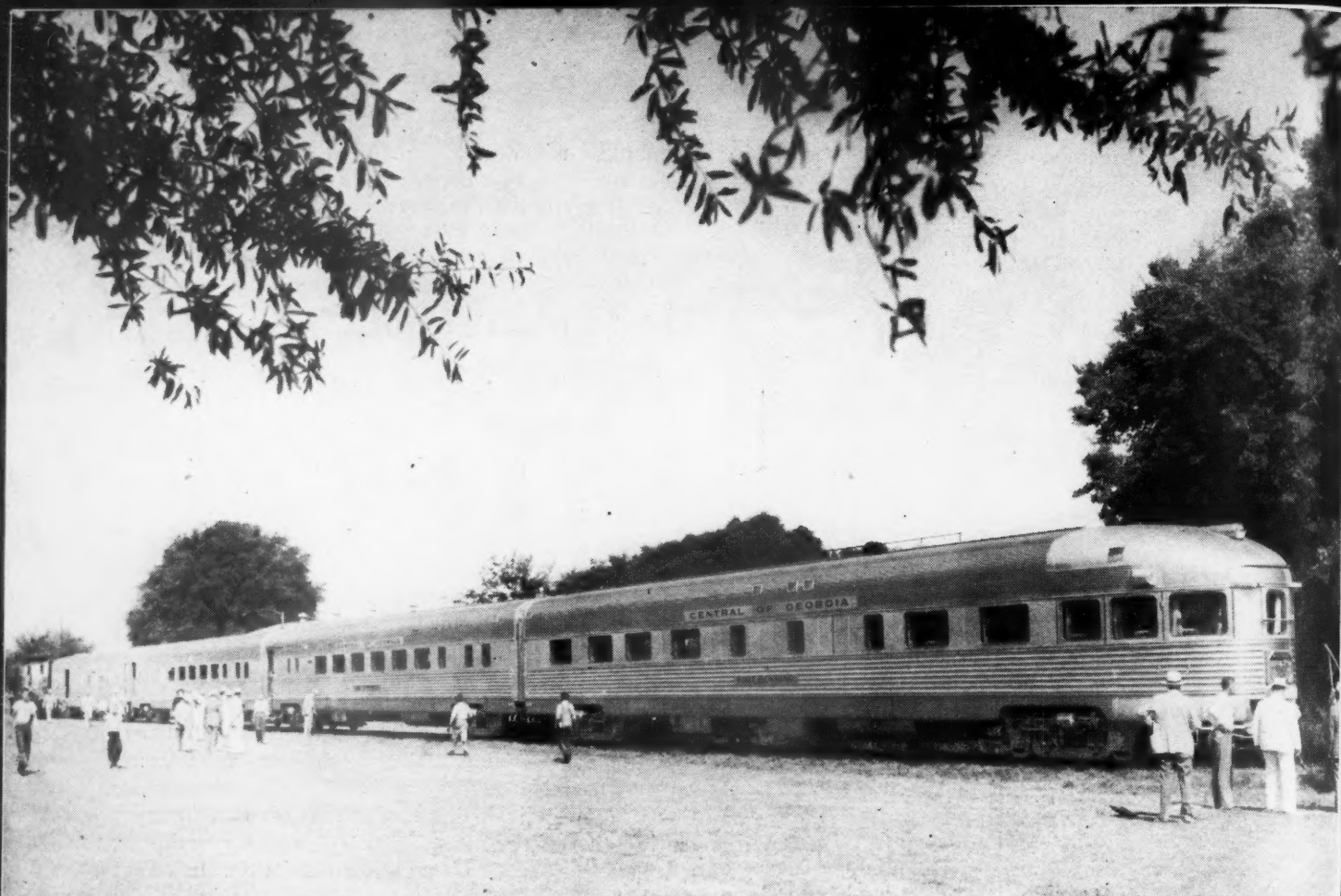
Two characteristics of most railroads cause them trouble, which could be avoided. The first of these is the fact that railroads are spread out over extensive territory, and the second is that they are operated 24 hours a day, 365 days a year, including Sundays and holidays. These conditions deprive railroad personnel, as compared with that of other industries, of close contact with officers and supervisors. As a result, the railroad man often harbors a feeling of resentment, bred of neglect.

To have a truly successful organization, every man in it ought to feel that he is a vital and integral part of it. One of the most effective single means of arousing this feeling is the liberal dissemination of information to each individual, advising him of what is going on in other departments, and, so far as practicable, what management is planning for the future. In recent years, management and employees seem to have been drifting farther apart, and it is highly desirable that serious and conscientious effort be made to reverse this trend.

It is disheartening to a person carrying heavy responsibilities to hear from outside sources or from the newspapers of plans which may materially affect his individual situation, but of which management has not troubled to inform him. Failure to tell the employee what is going on is likely to make him feel that management is not concerned about his interest in his job, or his mental attitude towards the company.

Each individual employee, from the chairman of the board down to the common laborer, is the center of a group of personal friends and associates. He may not be a definitely recognized leader in the community, but he is always a focal point of influence which in the aggregate, considering the thousands of individuals involved, may be of inestimable value in preserving favorable public relations. If he is supplied with timely information, he will be in a position to tell his friends and neighbors and the members of his church or club what is going on in the railroad and what is planned for the welfare of the public by his company in the purchase of new equipment, or establishing of new services. He will not be embarrassed, as he sometimes now is, when people ask him questions, or criticize his railroad, on points on which he has not been informed, and which he, therefore, cannot explain. Often an explanation would be very simple if he only knew the facts.

A football team is effective only if each player knows in advance not only what are his own individual assignments, but also what it is planned that each of his teammates will do, and has in his mind a general pattern of the plan of attack or defense. Teamwork can win victories in transportation as well as in athletic contests.



The "Man o' War" at Fort Benning, Ga., on June 11, its first day of exhibition

## *De Luxe Service on a 117-Mile Route*

**The coaches of the Central of Georgia "Man o' War" have roomy lounges—Tavern-observation car provides light meal service**

**A**FTER an exhibition tour beginning at Fort Benning, Ga., and ending at Atlanta, Ga., "Man o' War," the Central of Georgia streamliner, the four cars of which were built by the Budd Company, made its inaugural run on June 21. It began regularly scheduled operation on June 24 between Columbus, Ga., and Atlanta, on a route of 117 miles, with nine schedule stops and one flag stop in each direction. The train makes two round trips daily, a road mileage of 468. Northbound, the schedules are 2 hr. 50 min. and 3 hr., respectively. Southbound, both trips are on 3-hr. schedules. It is hauled by a 2,000-hp. single-unit Electro-Motive Diesel-electric locomotive.

The name "Man o' War" was chosen as a symbol of the speed and dependability of the new train and as a tribute to the famous race horse of the 1920's, whose track record of 20 victories in 21 starts is still unsurpassed in track annals. The military significance of

Georgia and of the route of the train suggested the names which have been given to the cars of which it consists: "Fort Mitchell" for the coach-baggage car; "Fort Oglethorpe" and "Fort McPherson" for the two coaches; and "Fort Benning" for the tavern-observation-lounge.

### **Passenger Accommodations**

The train has a seating capacity of 208 passengers, of whom 54 can be accommodated in each of the chair cars; 44 in the passenger section of the combination car, and 56 in the tavern and observation sections.

Each of the two 54-passenger coaches has roomy men's and women's lounges, opening from each of which are two toilets. The combination car has two washrooms, one on each side of the aisle, at the vestibule end. The coach seats are the rotating-reclining type with tubular aluminum ends and indi-

vidual adjustable footrests with large rubber rolls. The cushions and backs in each double seat are separate. The cushions are upholstered in foam-type rubber; the backs are of hair and spring construction. Each pair of seats has two side arm rests and a fixed center arm rest.

The lounge-dressing rooms in the 54-passenger coaches are each furnished with a settee, the base of which is fully enclosed and divided into two compartments for storage purposes. The upper portion of the seat back is hinged at the top so that it may be raised and supported in a horizontal position by collapsible brackets to form a shelf for dressing cases. The seat cushions and backs of these seats are upholstered with sponge rubber.

Each women's lounge is fitted with a vanity and a vanity chair. There are mirrors over the wash basins, on the toilet doors, and over the dressing table. In the men's lounge, mirrors

are arranged over the lavatories, on the toilet doors, and one over the settee. Two corner mirrors have been placed over the corner lavatories. The space under each wash basin is enclosed with stainless steel, and within this casing is a soiled-towel receptacle.

The continuous parcel racks in all coach compartments are of the open-rod type, of satin-finish aluminum, 18 in. wide. Fixtures are built in for individually controlled lights over each pair of coach seats. At one end of each 54-passenger coach is also a luggage compartment with four shelves.

The tavern-observation-lounge car is divided into three sections: the tavern section forward; the bar and pantry in the middle; and the observation-lounge at the rear. The tavern-lounge, in turn, is divided into three parts, the forward and rear of which are furnished with built-in settees against the sides of the car. In front of each settee are two oval pedestal tables securely anchored to the floor.

The middle portion of the tavern-lounge is divided into two card-playing sections with removable folding tables between facing pairs of built-in seats. All of the tables have plywood tops covered with rubber flooring bound with aluminum extrusions.

The observation-lounge is furnished with fourteen individual chairs and two sofas, all built on chrome-plated steel frames and fastened to the floor. A wood-veneered combined desk and magazine rack is built in against the partition at the front end of the compartment. On either side of the door at the rear end of the car is a small built-in table with a plywood top faced with decorative material and a base of carbon steel. The top of one is hinged for access to the air-brake back-up equipment housed in the base. There are two narrow tables of similar construction against the side walls of the observation lounge.

The front of the horseshoe serving bar faces toward the tavern. The bar top extends back 8 ft. from the front of the horseshoe, and longitudinal portions are enclosed, with a glass partition and shelves on the side adjoining the aisle to the observation lounge and with mirrors and shelves on the opposite side. The bar and pantry operate as a unit and provide facilities for preparing and serving light meals and snacks. Service is in the tavern-lounge.

### Decorations

Each car has a distinctive scheme of decoration which includes the floor covering, the upholstery, and paint colors on the walls and ceilings. The passenger compartment of the combination car is finished in olive gray on sides and end walls, and with fog gray, striped

with olive buff, alongside the air outlets on the ceiling. The olive buff is also applied on the sides of the corridor between the wash rooms. The seats are upholstered in blue, and the window drapes are slate blue. The floor is covered with marbelized asphalt tile with a field of white on black, a center aisle pattern of green and white on black and side aisle stripes of black and white on gray.

### Coach Appointments

One of the 54-passenger coaches has a light brown drab on side walls and ends, and gray white with antique ivory stripes at the sides of the central panel on the ceiling. The seats in the main passenger compartment are covered with henna needlepoint, and the drapes are turquoise. The asphalt-tile floor cover-

ing is a plain dark red field with a marbelized aisle pattern of white and gold on terra cotta, and stripes of white and brown on beige. The walls of the lounges in this car are finished in ivory, with yellow-white ceilings and green upholstery. In the men's lounge, the upholstery material is leather; in the women's needlepoint. The tile floor in both lounges is a marbelized green and white on black, bordered with white and gold on brown.

The other coach is finished in a combination of gray-green walls and yellow-white ceiling, green needlepoint seat coverings and gold and white drapes. The marbelized asphalt-tile floor is green and white on black, the aisle pattern white and brown on beige outlined with stripes of black and white on gray. The lounges have light brown drab sides and gray-white ceilings. Orange-



Superintendent Dillard (above) describes the new train to a group of sight-seeing visitors seated in a "Man o' War" coach. Below—The bar seen from the tavern-lounge

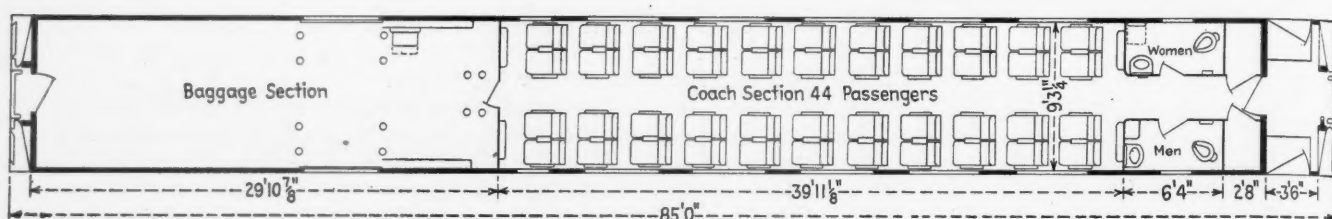


h large  
d backs  
e. The  
am-type  
d spring  
ats has  
l center

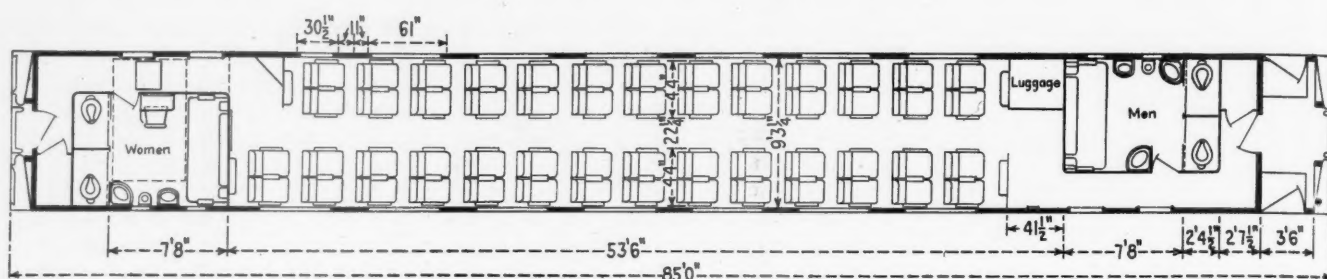
in the  
urnished  
is fully  
ompart-  
e upper  
nged at  
sed and  
ition by  
half for  
ons and  
olstered

ed with  
There  
sins, on  
dressing  
mirrors

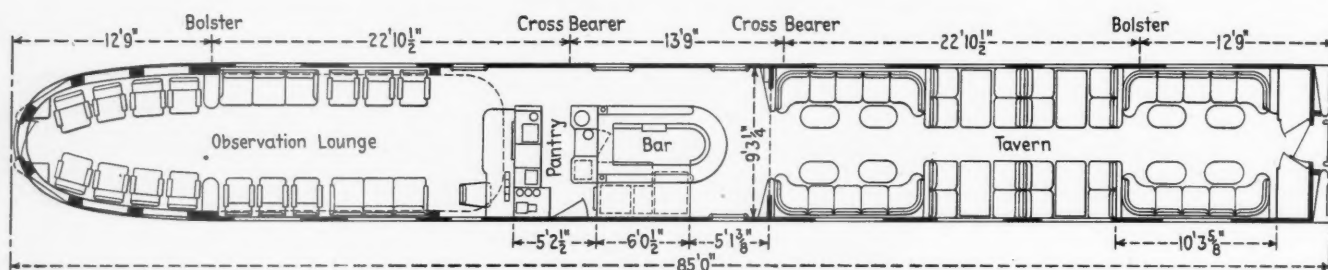
16, 1947



The floor plan of the combination baggage-coach



The floor plan of the 54-passenger coaches



Interior arrangement of the tavern-observation lounge car

red leather is the seat covering in the men's lounge and henna needlepoint in the women's. The floors are covered with a marbelized white and gold on brown with a border in green and white on black.

The sides of the tavern-lounge, the bar and the corridor of the tavern-observation car are finished in grayed flesh above the window sills and red below. The red is also applied on the ceilings of the bar section and the corridor. The grayed flesh on the sides is continued up on the ceiling of the lounge to the center panel, which is light beige.

The drapes are gold and white. The cushions of the leather-covered seats at the ends of the tavern-lounge are blue and the backs Chinese vermilion. The piping is off-white. The cushions and backs of the seats in the card-playing section are blue piped with Chinese vermilion. The table tops are red and white with inserts of black, gold and red. The bar top is black linoleum. The marbelized rubber-tile floor has a field of black, gold and red, patterned with red and white chevron stripes.

In the observation-lounge section the sides are burnt rose and the center panel on the grayed peach ceiling is blush.

The columns at the sides of the mirror over the bleached-walnut magazine rack are also grayed peach, and the remainder of the end wall is burnt rose. The mirror is gold on a flesh tint, with the upper part sand etched.

The leather lounges in the observation room are off-white piped with Madder red. The chairs, upholstered in needlepoint mohair, are, alternately, brown and sandalwood. The ecru drapes are striped in magenta and strawberry. The Hooksett carpet is burgundy.

### The Car Structures

The cars are stainless-steel structures in which the members are assembled by the Budd Shotweld process, with a small amount of riveting. Carbon steel and aluminum are used in the structure where strength or resistance to corrosion is not of primary importance, and on inside linings, partitions, brackets, and supports.

The roof is covered with stainless steel formed in rectangular corrugations welded to Z-section stainless-steel carlines. At the rear of the observation car the roof is formed of curved smooth sheets of stainless steel. Longitudinally, the roof structure is reinforced by two strong exterior purlines which are con-

nected directly at the top of the end collision posts.

The side structure is built in the form of a modified truss consisting of strong longitudinal members at the top and bottom, and C-shaped vertical posts and diagonal members between the side and the window rail. The characteristic fluted panels are screwed to the outside face of the frame members below the window sills and the screws are covered by snap-ring molding strips, a characteristic feature of Budd construction. The deadlights between the windows are covered with flat panels of stainless steel which are sealed against leaks by rubber glazer strips.

A short skirt of corrugated stainless steel welded to vertical supports is attached below the side sills. This is continuous from end to end of the car body with hinged panels at the trucks, the refrigerating units and the battery boxes. The skirts at the oval end of the observation car are smooth formed sheets of stainless steel.

The cars are designed to equal or exceed the requirements of the Railway Mail Service specifications and the recommended practice of the Association of American Railroads. The values for these cars materially exceed the minimums of these two specifications.

Thus, the center sill is designed to withstand an end load of 1,800,000 lb. before failure, which compared with a minimum of 800,000 lb. in the two specifications, and the shear strength of the collision posts at the point of application to the underframe is 1,282,000 lb., which compares with the minimum acceptable strength of 600,000 lb.

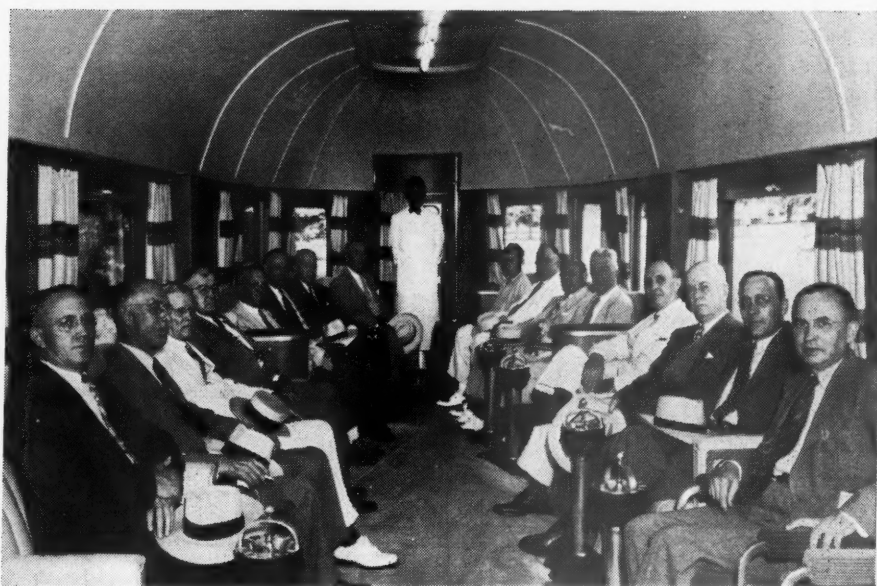
### Structure Details

Each car has a single vestibule which is closed with two-section side doors, divided horizontally at mid-height.

The floor structure consists of stainless-steel pans welded to the underframe, a 1/2-in. waterproof plywood rough floor attached directly to the top flanges of the floor pans, and insulated from the steel structure by sound-deadening material and surfaced with 3/8-in. asphalt tile. In the baggage room a 1 3/8-in. tongue-and-groove floor of matched maple is laid longitudinally on the plywood under-floor and attached by screws to the top of the floor pans. An additional layer of flooring is laid transversely between the side doors. Vestibule floors are surfaced with diamond patterned stainless steel.

The cars are insulated throughout—ceilings, sides, and flooring—with Fiberglas, 3 in. thick. In the floor, this is placed in the floor pans below the plywood underfloor.

The interiors of the passenger compartments have ceilings of aluminum laid in large sheets with sunken transverse joints. The center sections under the air-distribution ducts are covered by hinged trap doors which provide access to the ducts for cleaning and to the electric wiring. Over the wash rooms, lounges and adjacent passages, the flat ceilings are of sound-deadened



A group of Central of Georgia officers in the observation-lounge

metal. Similar material is applied to the side walls of the passenger compartments. Kick plates of stainless steel are placed along the bottom of the passenger-compartment walls. These are extended up to the window sills at the ends of the passenger compartments and behind lavatories and toilets in the washrooms and lounges.

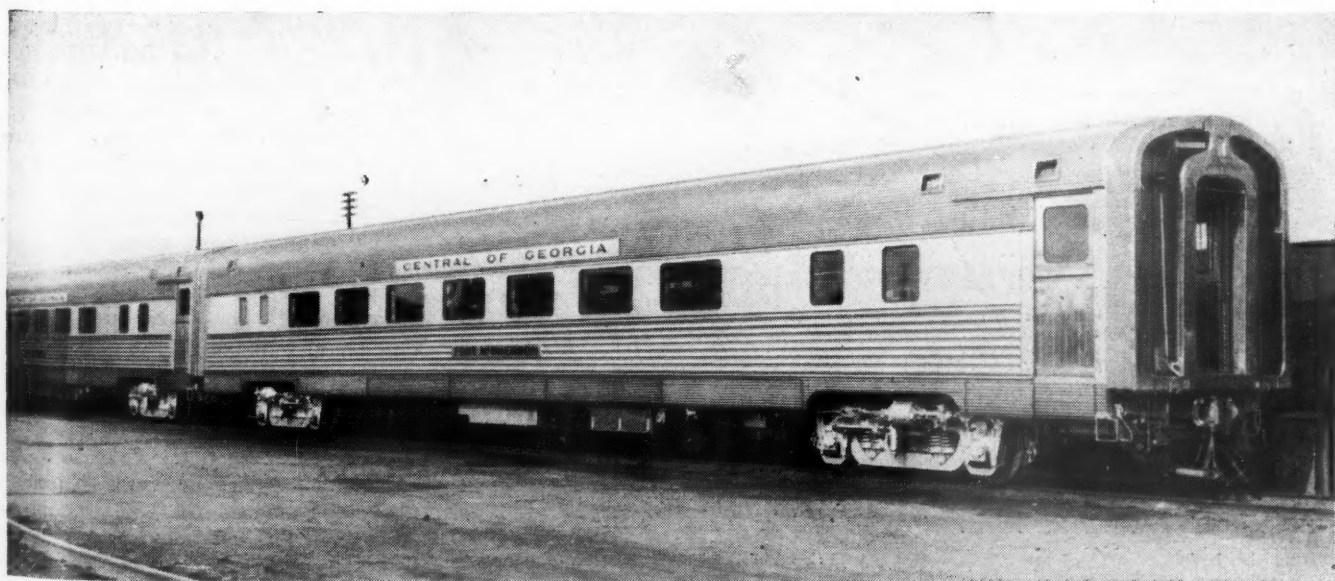
All windows, except in the side entrance doors, are double glazed in sash of extruded aluminum. The outside panes are tinted polished plate glass and the inside panes laminated safety glass. The glass in all windows is set in the removable type of rubber glazing strips.

With the exception of the baggage section of the combination car, the train is air conditioned by Safety electro-

mechanical units. The refrigerating units are of the package type and are suspended under the floors of the cars behind doors in the skirting. The combination-car unit has a capacity of seven tons; on each of the other cars, the capacity is eight tons.

The evaporator unit is located above the ceilings over the washroom in the combination car and over the men's lounge in each of the two coaches. In the tavern-observation car, there are two units, one of 4 1/2 tons' capacity for the tavern section, and one of 3 1/2 tons' capacity for the observation lounge. Both are located above the bar and buffet.

The blower fans of the evaporator units deliver 2,400 cu. ft. of air per min., one-third of which is fresh air,



The "Fort McPherson" coach

on the all-passenger-carrying cars. For the passenger compartment of the combination car, the circulating capacity is 2,200 cu. ft. per min.

In the 54-passenger coaches, fresh air is admitted through louvered openings in the roof at the platform end and is filtered at the end of each duct passing into the plenum chamber. The return air passes through a ceiling grill and thence through filters into the plenum chamber. The blower forces the mixed air through the evaporator unit into a central overhead duct from which it is discharged into the passenger compartments through two continuous lines of distributor fixtures. Air is discharged into each lounge unit through Anemostats.

Three fan-driven exhaust ventilators, two of which are located over toilet rooms at the two ends of the car, and another fan over the passage adjacent

## Principal Weights and Dimensions of the Cars for the "Man o' War"

	Comb. pass.-bagg.	Coach	Tavern- observa- lounge
Weights, lb.:			
Body, ready to run	82,560	84,130	86,600
Normal maximum load	104,460	93,270	95,300
Trucks	37,600	36,350	37,220
At rail:			
Ready to run	120,160	120,480	123,820
Normal maximum	142,060	129,620	132,520
Coupled length, ft.	85	85	85
Journal size, in.:			
Front	6 x 11	5½ x 10	6 x 11
Rear	5½ x 10	5½ x 10	5½ x 10
Height from rail over exhaust hood, ft.-in.	14-3¼/16	14-3¼/16	14-3¼/16

to the women's lounge, discharge air from the car. The blower and exhaust fans are equipped with resistors to regulate their speeds in balancing the ventilating system. Generally speaking, the ventilating arrangements in the other cars are similar to those in the coaches, with alterations as required by floor plans variations.

The cars are fitted with the Vapor system of steam heat. All passenger compartments have fin radiation along the floors at the side walls, set behind stainless-steel guards. The system is thermostatically controlled and the floor heat operates in conjunction with an overhead heating coil in the air-conditioning evaporator unit which supplies from 30 to 40 per cent of the total car heat.

Each of the cars is provided with a pressure water system operating from two interconnected 150-gal. stainless-steel tanks enclosed in an insulated stainless-steel casing under the car floor. Except for the steam trainline, which is of copper-bearing steel tubing, and the air-brake piping on the trucks, which is extra heavy wrought iron, the piping on these cars is copper tubing.

## The Electrical System

Each car has one body-mounted generator-motor operated by a Spicer drive. The generator-motor unit consists of a 20-kw., 40-volt d.c. generator and a 25-hp., 220-volt a.c. motor. For use with the fluorescent lights, the observation car has a 2-kva., 32-volt-d.c. to 110-volt-a.c. motor alternator. An Exide 1,000-amp. hr. battery of 16 cells is installed on each car.

The lighting of the combination car and the two 54-passenger coaches is by incandescent lamps in Safety fixtures. In the coach section of the combination car are 22 lights set in the parcel rack over the seats, and five ceiling lights. In the 54-passenger coach, there are 27 parcel-rack lights and eight ceiling fixtures.

The lighting of the tavern section of the tavern-observation car is from over the windows on each side in a continuous fixture of translucent plastic snapped into an aluminum extrusion in which are housed fluorescent tubes and emergency incandescent lights. In the observation lounge a continuous line of exposed fluorescent tubes is mounted on a painted reflector of extruded aluminum along the center line of the ceiling. A cove in the ceiling on each side of the room encloses a line of fluorescent

(Continued on page 57)

## Partial List of Materials and Equipment on the Budd-Built Cars for the Central of Georgia "Man o' War"

Truck castings	General Steel Castings Corporation, Eddystone, Pa.
Wheels and axles	Bethlehem Steel Company, Bethlehem, Pa.
Journal boxes	Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.
Side bearing	Edwin S. Woods & Co., Chicago
Couplers	National Malleable & Steel Castings Co., Cleveland, Ohio
Draft gear; buffer gear; center pins	W. H. Miner, Inc., Chicago
Air brakes	New York Air Brake Company, Watertown, N. Y.
Truck brakes	American Steel Foundries, Chicago
Hand brakes	National Brake Company, New York
Springs	American Locomotive Company, Railway Steel Spring Division, New York
Shock absorbers	Monroe Auto Equipment Company, Monroe, Mich.
Sound insulation	Fabreka Products Company, Boston, Mass.
Vestibule step-well mechanism	O. M. Edwards Company, Syracuse, N. Y.
Foot plate and step tread	Morton Manufacturing Company, Chicago
Insulation, body and steam trainline	Gustin-Bacon Manufacturing Company, Kansas City, Mo.
Vestibule curtains	Adams & Westlake Co., Elkhart, Ind.
Diaphragms:	
Inside	Morton Manufacturing Company, Chicago
Outside	B. F. Goodrich Company, Akron, Ohio
Windows:	
Double-glazed sash	Hunter Sash Company, Flushing, L. I., N. Y.
Single-glazed drop sash	O. M. Edwards Company, Syracuse, N. Y.
Glass, Outside clear and inside; mirrors	Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Glass, Outside prism	Pressed Prism Plate Glass Company, Chicago
Asphalt tile flooring	Johns-Manville Sales Corporation, New York
Carpet	Thas. P. Cochran Company, Bridgeport, Pa.
Coach seats	Coach & Car Equipment Corporation, Chicago
Coach settees; desk chairs	Heywood-Wakefield Company, Gardner, Mass.
Dressing-table chairs	Heywood-Wakefield Company, Gardner, Mass.
Leather seat coverings	S. Karpen & Bros., Chicago
Mohair seat coverings	Eagle-Ottawa Leather Company, Grand Haven, Mich.
Parcel racks; light fixtures	Goodall Fabrics, Inc., New York
Table top	Safety Car Heating & Lighting Co., New York
Bar equipment	C. Stouman & Son, Philadelphia, Pa.
Ash stands	Angelo Colonna, Philadelphia, Pa.
Paint	F. T. Haffner & Co., Chicago
Hardware:	E. I. du Pont de Nemours & Co., Wilmington, Del.
Body end door locks; rim locks	Jas. L. Howard & Co., Hartford, Conn.
Door closers and cylinder locks	Yale & Towne Manufacturing Co., Stamford, Conn.
Window shade mechanism	Adams & Westlake Co., Elkhart, Ind.
Air conditioning; air distributor	Safety Car Heating & Lighting Co., New York
Ventilating fans and blowers	B. F. Sturtevant Company, Division of Westinghouse Electric Corporation, Hyde Park, Boston, Mass.
Circulating fans	Diehl Mfg. Co., Somerville, N. J.
Air filters	Air-Maze Corporation, Cleveland, Ohio
Grills	Barber-Colman Company, Rockford, Ill.
Heating system	Vapor Car Heating Company, Chicago
Motor generator and motor alternator; lamp regulators; main switch panel	Safety Car Heating & Lighting Co., New York
Generator drive	Spicer Manufacturing Corporation, Toledo, Ohio
Batteries	Electric Storage Battery Company, Chicago
Wire and cable	General Electric Company, Schenectady, N. Y.
Battery charging and trainline receptacles	Pyle-National Company, Chicago
Annunciator	O. M. Edwards Company, Syracuse, N. Y.
Vibrator inverter	Central Engineering Laboratories, Chicago
Water cooler	Marquette Railway Supply Company, Chicago
Hoppers	Dunier Company, Chicago
Lavatories and dental basins	Crane Company, Chicago
Soap dispensers	Imperial Brass Manufacturing Company, Chicago
Paper towel dispensers	Scott Paper Company, Chester, Pa.
Toilet-paper holder	Morgan Paper Company, Lititz, Pa.
Ash receptacles, wall type	Dayton Manufacturing Company, Dayton, Ohio
Coat and hat hooks	H. S. Getty & Co., Philadelphia, Pa.
Used razor-blade receptacle	Pass & Seymour, Inc., Syracuse, N. Y.
Razor strap hook	P. & F. Corbin Division of the American Hardware Company, New Britain, Conn.
Fire extinguisher	Pyrene Manufacturing Company, Newark, N. J.

# Seaboard Speeds Trains with Photographic Copying

**Simplification of paper work results in time savings of one hour or more per train at big interchange points**

**T**HROUGH the utilization of photography for the speedy handling of routine paper work required in connection with train operation, the Seaboard Air Line has evolved a procedure which is proving to be a triple time-saver. Three separate operations—the preparation of an interchange report, a traffic department passing report, and accounting department car records—have been consolidated into a single, speedy function. Installation of Remington-Rand "Film-a-Record" equipment at the Seaboard's Hermitage (Richmond, Va.) yard office—where large blocks of cars, and frequently solid trains, are interchanged with connecting carriers, particularly the Richmond, Fredericksburg & Potomac, much of the traffic being perishable freight—has brought about savings of as much as one hour a train.

At the time the matter of speeding up the paper-work procedure was taken under study, the normal procedure was to use the "Red Ball" envelope as the source of basic information for preparing interchange reports. Passing reports required by the traffic department were prepared by the yard force as a separate operation, basic data being obtained from the "Red Ball" envelopes on perishable traffic and from the original waybills on dead freight. Passing records for the accounting department were prepared in still a separate operation, and embraced only traffic on which the Seaboard performed services as an intermediate carrier.

The time required for abstracting from the waybill or "Red Ball" envelope sufficient data for preparation of interchange reports and two sets of passing reports was approximately one minute per waybill or envelope, or about one hour to abstract the necessary information on a 60-car train. On the other hand, the minimum time required for physical handling of a train in the yard is approximately 8 min. from the time of its arrival until it is ready for delivery to connections. Obviously any method which would eliminate or reduce the time required for abstracting data would permit that much quicker delivery of cars to connections.

Photographing of other types of records had been previously employed by the Seaboard with satisfactory results.

In turning to photographic recording for solving the immediate problem, several obstacles were met, the principal one being the necessity of producing a readable record in a matter of minutes

this new process has been the elimination of delay in delivery of cars to connections while waiting for information to be recorded from the waybills. Under this process the waybills are ready for movement with the cars as soon as the cars are ready for delivery to a connecting carrier.

Interchange reports are prepared from the film record. The addition of a small amount of information to the interchange reports makes it possible to use those records as passing reports to serve the needs of both the freight traffic and accounting departments.

In order to adapt the interchange report for use as an accounting and traffic department passing report, it was necessary to develop means whereby ap-



**Photographic equipment at the Seaboard's Hermitage yard copies the waybills for a 75-car train in 7 minutes**

rather than hours. This called for special consideration in which Remington-Rand, Inc., was asked to assist. Collaboration resulted in the designing and building of an "on-the-spot" developer, which required a minimum of 20 min. to develop pictures. Experiments were then made in the office of the auditor of revenues from which there was evolved a simple developing procedure whereby pictures of waybills for a train of 75 cars might be obtained in less than 7 min. from the time waybills became available. The yard clerical force quickly learned the process of photographing and developing.

A primary result of the adoption of

proximately 40 copies of the interchange report could be produced. This has been accomplished by using a hectograph carbon reversed behind the master copy of the interchange report and reproducing the number of copies required through the use of an electrical automatic direct-processing "spirit" duplicator. In adapting the interchange report to this use, it has also been necessary to rearrange the order of the various copies, using a full width sheet for the master copy and providing sheets of pre-matched and pre-carbonized forms. The new process is based on a study conducted by W. D. Steele, auditor of revenues of the Seaboard.

# 1946 Railroad Construction Indices

THE Engineering Section of the Interstate Commerce Commission's Bureau of Valuation has issued its Railroad Construction Indices for 1946, showing that last year's overall index for the country as a whole was 232, up 23 points or 11 per cent from 1945's 209 and 31 points from 1944's 201. The 1946 level was the highest in the history of the indices, which are weighted averages based on 1910-1914 costs as 100.

The 1946 index for road construction costs was 216, as compared with 197 in 1945 and 187 in 1944. The equipment index was 294 for 1946, as compared with 255 in 1945 and 194 and 254 in 1943, while the index of "general expenditures" was 217 for 1946, as compared with 198 in 1945 and 188 in 1944. The indices for the country as a whole (shown in the accompanying table) are

broken down in the bureau's compilation into eight regional sets. "The indices," the statement says, "represent territorial index factors and are of value in indicating trends. They are not necessarily applicable for use in the determination of reproduction costs upon individual railroads."

An accompanying press notice from I.C.C. Secretary W. P. Bartel pointed out that while "the important grading account remained stationary at 140 and there was only a relatively small increase in ties and lumber because of substantial increases in prior years, rail and track fastenings, which had not increased much during the war years, showed a moderate upturn—rail increasing from 152 to 165; and fastenings from 176 to 190."

The accounts for which the indices are shown are primary accounts designated in the Classification of Investment in Road and Equipment of Steam Roads. They are as follows:

## I—ROAD:

1. Engineering
- 2½. Other Right of Way Expenditures
3. Grading

5. Tunnels and Subways
6. Bridges, Trestles, and Culverts
7. Elevated Structures
8. Ties
9. Rails
10. Other Track Material
11. Ballast
12. Tracklaying and Surfacing
13. Fences, Snowsheds, and Signs
16. Station and Office Buildings
17. Roadway Buildings
18. Water Stations
19. Fuel Stations
20. Shops and Engine Houses
21. Grain Elevators
22. Storage Warehouses
23. Wharves and Docks
24. Coal and Ore Wharves
26. Telegraph and Telephone Lines
27. Signals and Interlockers
29. Power Plants
31. Power Transmission Systems
35. Miscellaneous Structures
37. Roadway Machines
38. Roadway Small Tools
39. Public Improvements—Construction
44. Shop Machinery
45. Power Plant Machinery

## II—EQUIPMENT:

51. Steam Locomotives
52. Other Locomotives
53. Freight-Train Cars
54. Passenger-Train Cars
56. Floating Equipment
57. Work Equipment
58. Miscellaneous Equipment

## III—GENERAL EXPENDITURES:

71. Organization Expenses
72. General Officers and Clerks
73. Law
74. Stationery and Printing
75. Taxes
76. Interest During Construction
77. Other Expenditures—General

## REGIONS I TO VIII, INCLUSIVE

### Tabulation of Indices by Years and by Accounts Applicable to the Entire United States

Acct.	Per cent	1915	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40	'41	'42	'43	'44	'45	'4	
<b>ROAD</b>																																		
1	2.83	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	151	175	186	187	197	216	
2½	.....	104	107	127	151	172	198	161	154	168	165	161	159	156	155	155	151	143	121	117	127	132	132	141	137	135	134	145	174	185	190	201	236	
3	18.19	100	110	130	165	190	250	170	143	160	164	149	153	143	135	133	123	118	106	98	100	101	99	103	93	90	90	99	135	142	143	144	148	
5	1.51	103	109	128	150	183	208	179	165	179	179	179	178	169	155	155	143	130	119	111	122	120	130	139	141	140	149	160	192	223	219	236	260	
6	9.41	105	111	146	162	178	206	165	160	176	173	171	170	168	164	163	150	134	122	122	136	135	141	155	150	149	156	174	210	227	222	240	272	
7	0.04	102	124	169	177	184	210	150	153	173	171	168	165	163	163	162	154	144	129	122	136	136	137	158	150	149	159	175	209	236	231	249	284	
8	5.58	100	100	112	133	170	201	189	157	177	175	172	173	175	176	175	170	155	144	139	149	147	150	159	154	158	164	181	199	228	234	241	252	
9	8.57	101	106	121	148	152	168	158	144	145	145	144	144	144	144	144	144	144	140	134	123	123	124	143	139	136	138	139	144	144	146	152	165	
10	3.39	99	129	198	210	203	209	192	161	182	179	177	177	177	177	170	169	165	163	158	150	147	150	169	169	167	167	170	175	173	172	176	190	
11	4.09	103	107	114	140	150	207	191	176	175	175	174	175	176	176	176	168	159	146	146	141	139	140	143	143	143	143	153	170	175	175	181	194	
12	4.35	100	100	130	163	175	218	174	165	188	188	188	188	188	188	188	182	175	164	157	159	165	165	169	167	165	165	178	209	241	252	273	298	
13	0.65	100	120	138	174	193	211	192	179	183	183	180	178	179	179	177	175	168	147	135	140	140	138	145	145	141	141	150	168	179	179	189	206	
16	4.42	101	115	135	154	185	215	192	180	194	193	188	184	189	188	187	182	165	141	145	151	151	157	166	166	166	166	177	188	208	219	227	244	291
17	0.51	100	115	136	156	185	216	192	178	196	196	189	187	192	191	190	186	166	140	145	150	150	150	162	162	162	162	177	186	206	226	237	258	307
18	0.82	101	120	159	170	191	213	185	178	187	187	186	182	185	186	184	177	161	147	151	155	155	156	166	166	166	166	172	185	195	208	214	227	249
19	0.26	101	120	153	160	190	212	181	166	185	185	182	180	183	183	183	174	159	144	149	154	154	153	159	159	159	163	187	205	216	222	242	270	
20	2.16	102	118	141	159	188	216	191	180	193	192	188	185	189	188	187	176	161	137	142	147	147	147	155	165	165	165	176	188	204	216	222	248	294
21	0.09	100	110	128	150	185	214	190	184	197	197	193	190	195	193	193	182	165	137	142	147	147	147	156	164	164	164	166	200	208	213	217	236	281
22	0.04	100	115	135	155	185	210	193	178	198	198	193	189	193	191	191	184	165	137	142	147	147	147	154	166	166	166	176	195	207	218	226	253	300
23	0.53	101	114	133	152	178	204	167	158	175	175	174	177	178	178	178	172	158	136	141	146	146	149	153	153	153	153	161	167	212	226	234	255	291
24	0.44	101	117	145	155	184	204	170	159	176	176	174	176	176	176	176	172	157	136	142	147	147	147	151	153	153	153	160	185	199	211	215	236	278
26	0.34	103	124	147	158	164	192	191	162	187	179	163	157	163	165	165	150	138	121	119	124	128	131	135	129	129	134	143	156	165	165	173	192	
27	1.58	94	106	132	152	165	175	163	158	165	164	162	169	158	155	154	147	138	130	130	133	136	138	143	143	143	146	156	165	165	176	176	199	
29	0.16	104	122	141	158	189	218	197	184	196	196	191	186	191	191	189	177	162	138	143	148	148	152	167	167	167	176	194	204	213	219	246	296	
31	0.61	109	145	174	189	190	207	175	164	180	174	175	176	176	179	183	175	149	143	143	147	149	150	154	148	148	153	162	167	171	171	180	201	
35	0.04	101	117	137	156	186	217	192	179	195	195	190	186	191	190	189	182	164	141	146	151	151	154	161	161	161	168	178	183	198	208	229	290	
37	0.08	105	113	127	146	158	170	162	149	151	151	151	151	151	149	148	147	144	138	138	147	147	147	161	161	153	154	158	169	169	187	187	222	
38	0.05	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
39	1.07	104	108	137	161	182	208	171	164	178	175	171	169	166	165	165	161	153	131	127	139	137	139	139	152	145	142	146	163	198	208	203	217	236
44	0.95	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	179	179	179	198	200	202	212	224	224	228	236	236	262	
45	0.33	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	168	166	171	180	177	180	189	194	194	190	190	191	217	
<b>Wtd. Ave.</b>																																		
1-45	73.09	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	151	175	186	187	197	216	
<b>EQUIPMENT</b>																																		
51	5.42	86	102	145	189	202	248	192	179	197	185	171	191	190	179	188	194	184	168	166	176	188	188	201	201	201	215	230	255	265	265	265	290	
52	0.10	100	117	137	184	184	217	197	196	198	199	192	194	202	203	221	221	210	175	165	185	190	190	198	199	199	199	200	203	185	173	173	185	
53	11.22	101	148	183	243	267	284	184	156	200	179	171	163	178	169	185	181	161	144	144	165	177	180	191	190	198	204	218	239	254	254	254	300	
54	2.16	89	104	132	164	197	213	169	152	192	187	183	189	191	180	183	181	178	161	161	173	182	182	195	195	194	200	213	230	240	240	240	285	
56	0.48	107	125	164	227	245	239	200	175	170	170	170	170	170	170	165	158	148	148	158	160	160	171	171	171	171	176	188	207	220	229	238	256	
57	0.56	96	128	165	225	244	263	193	168	203	183	188	180	192	184	195	191	178	165	165	177	180	180	197	197	200	208	220	247	254	254	254	292	
58	.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	150	
<b>Wtd. Ave.</b>																																		
51-58	19.94	96	130	166	219	240	265	185	163	198	182	173	174	183	174	186	185	170	153	153	169	180	181	195	194	198	206	220	242	254	255	255	294	
<b>GENERAL EXPENDITURES</b>																																		
71-75																																		
& 77	0.89	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	151	175	186	187	197	216	
76	6.08	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153	144	132	128	132	132	134	143	139	138	141	152	176	187	188	198	217	
<b>Wtd. Ave.</b>																																		
71-77	6.97	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153																	

# Great Northern Installs High-Capacity Electric Locomotives

Two 11,000-volt single-cab units, in service on electrified division, develop a continuous traction rating of 119,000 lb.

By D. R. MacLEOD  
Transportation Engineering Division  
General Electric Company  
Erie, Pa.

TWO high-capacity single-cab motor-generator locomotives, each of which weighs 720,000 lb. and has all its weight on the twelve driving axles, have been delivered to the Great Northern from the Erie, Pa., works of the General Electric Company. These locomotives are in operation over the 75-mile, 11,000-volt, 25-cycle electrification of the Great Northern between Wenatchee, Wash., and Skykomish, which includes a tunnel 7.79 miles long—the longest in the Western Hemisphere—and a ruling grade of 2.2 per cent. Each locomotive has a continuous rating of 119,000 lb. tractive force at 15.75 miles an hour, the highest developed by any existing single-cab locomotive at that speed.

The running gear of the new locomotives is patterned, mechanically, after the type that has been in successful operation on high-speed passenger and lower-speed freight locomotives on railroad electrifications in the eastern part of the United States, except that this is the first time the guiding trucks on this type of running gear have been motorized. The electrical equipment is patterned after that in use on the 11,000-volt a.c. motor-generator locomotives that have been in successful operation on the Great Northern for the past twenty years. The older locomotives, built by General Electric, have a wheel arrangement of 1-C+C-1. The table compares the two designs.

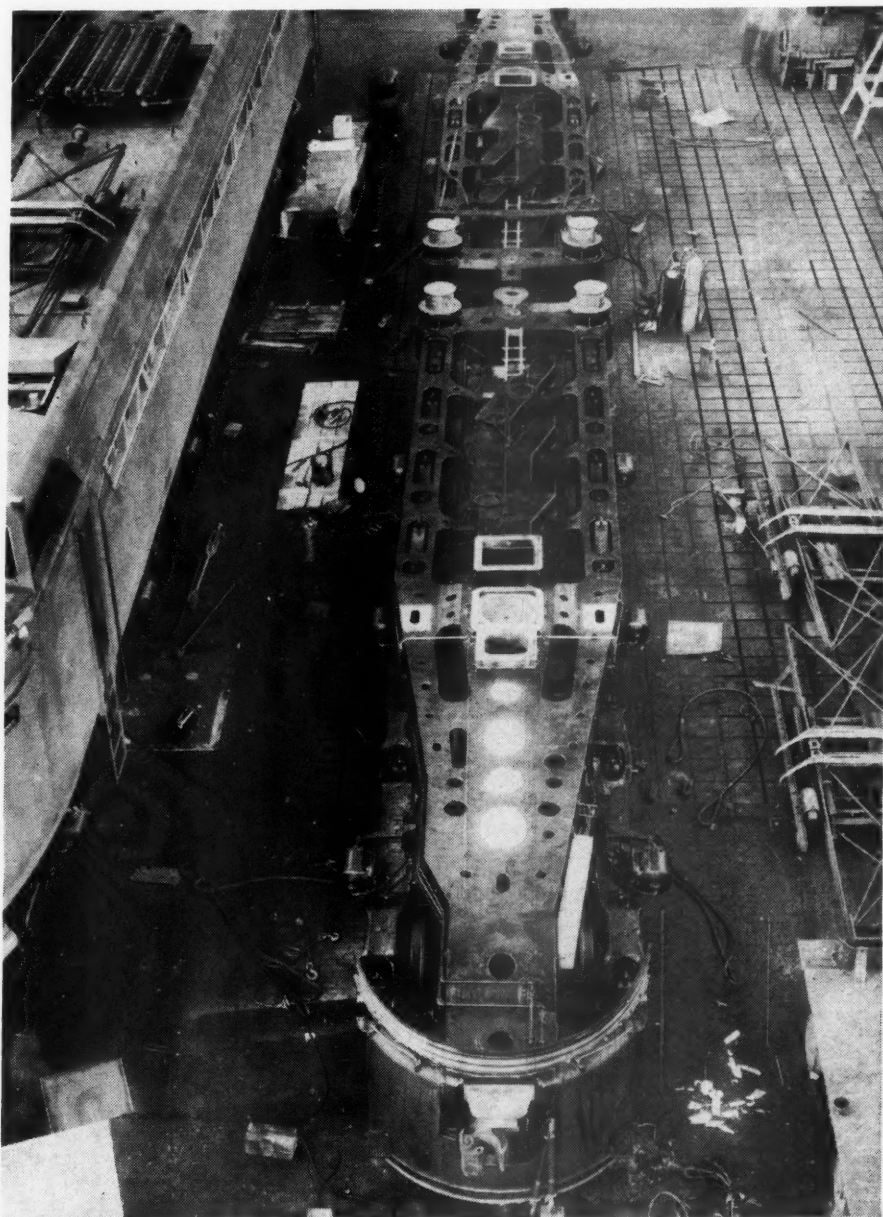
Old and New Single-Cab Locomotives Built By General Electric for the Great Northern

	New single-cab	Old single-cab
Wheel arrangement	B-D+D-B	1-C+C-1
Horsepower at rail	5,000	3,000
Total weight, lb.	720,000	539,000
Weight on drivers, lb.	720,000	426,200
Number of driving axles	12	6
Continuous tractive force, lb.	119,000	60,500
Continuous adhesion	16.6 per cent	14.2 per cent
Speed at continuous t. f., m.p.h.	15.75	18.6
Maximum safe speed, m.p.h.	65	50
Length over couplers, ft.-in.	101-0	73-9
Rigid wheel base (maximum), ft.-in.	16-9	15-4
Height overall, ft.-in.	16-0	15-3
Driving wheel diameter, in.	42	55

The new locomotives provide 67 per cent more horsepower in a single cab than the older locomotives. The heavy ruling grades and the curved right-of-

high ratio of weight on drivers to horsepower rating. The motor-generator locomotive is particularly suited for starting freight trains on heavy grades. It provides regenerative braking as an aid to safe operation and as a means of conserving power. The constant maximum-horsepower characteristic minimizes peak demands on the power-supply sys-

way of the Great Northern's electrified division require a locomotive with a



The articulated chassis of the General Electric locomotive for the Great Northern

tem with a consequent reduction in the peak-demand power charges. The locomotives have been designed to negotiate a 10-deg. curve when coupled to a train. They will negotiate a 17-deg. curve when operating alone.

### Running Gear

The new locomotives are of the articulated-truck type, having two main four-axle trucks and two two-axle swing-bolster trucks. The main-truck castings extend to the ends of the locomotive where the smooth cast pilots and draft gears are attached by bolting. The two main-truck frames are connected at the center by a draw-bar, protected on either side by lips on the main castings. The main trucks are also connected at the draw-bar by a spring-loaded restraint device for guiding purposes. Each main truck carries four axles which are side equalized by a system of equalizing bars and semi-elliptic springs. Helical springs are used between the elliptic springs and the journal boxes of the outer drivers of each truck for additional cushioning. Lateral motion up to 1 1/4 in. is permitted on the two inner axles on the main trucks to facilitate negotiating sharp

curves. Lateral-motion devices in the form of sandwiches of alternate layers of steel and rubber, bonded together, are provided for these axles.

The two swing-bolster trucks have two axles each and carry the main trucks through center-plates located beyond the cab center-plates towards the ends of the locomotive. The load is transferred from the center-plate and bolsters to the truck frames through roller-type, variable-resistance centering devices to allow the proper restrained lateral motion of the truck relative to the center-plate. Semi-elliptic springs on the top of each journal box, linked to the truck frame through helical springs at their outer ends, and by solid links to drop-center spring-loaded equalizer beams at their inner ends, cushion and partially equalize the trucks. These trucks are connected to the main trucks by spring-loaded restraining devices to improve stability on tangent track.

All wheels are 42-in. in diameter. They are provided with single-shoe brakes. The main trucks each have four sanders located at the outside of the four outer drivers. The swing-bolster trucks each have four sanders located on the outside of each wheel.

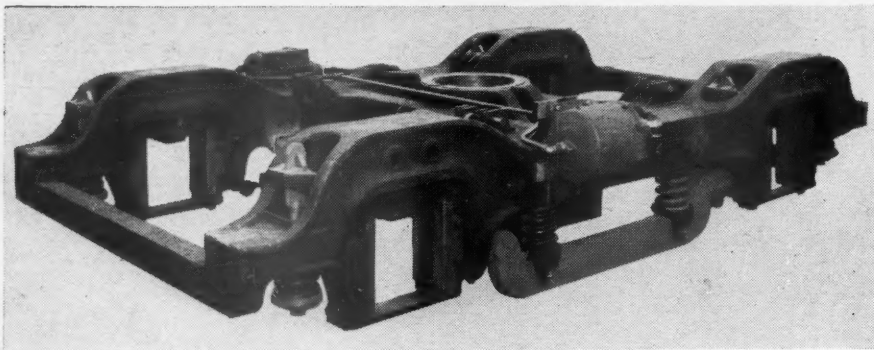
The locomotive cab structure is car-

ried by the main truck frames through spring loading-pads located at the draw-bar, and by center-plates located ahead of the front driver on the main trucks. One of these center-plates is of the sliding type to accommodate the action of the drawbar. The cab structure is of welded construction. It includes a truss at each side of the cab. Special attention was given to the collision posts to provide adequate strength in the noses of the locomotive.

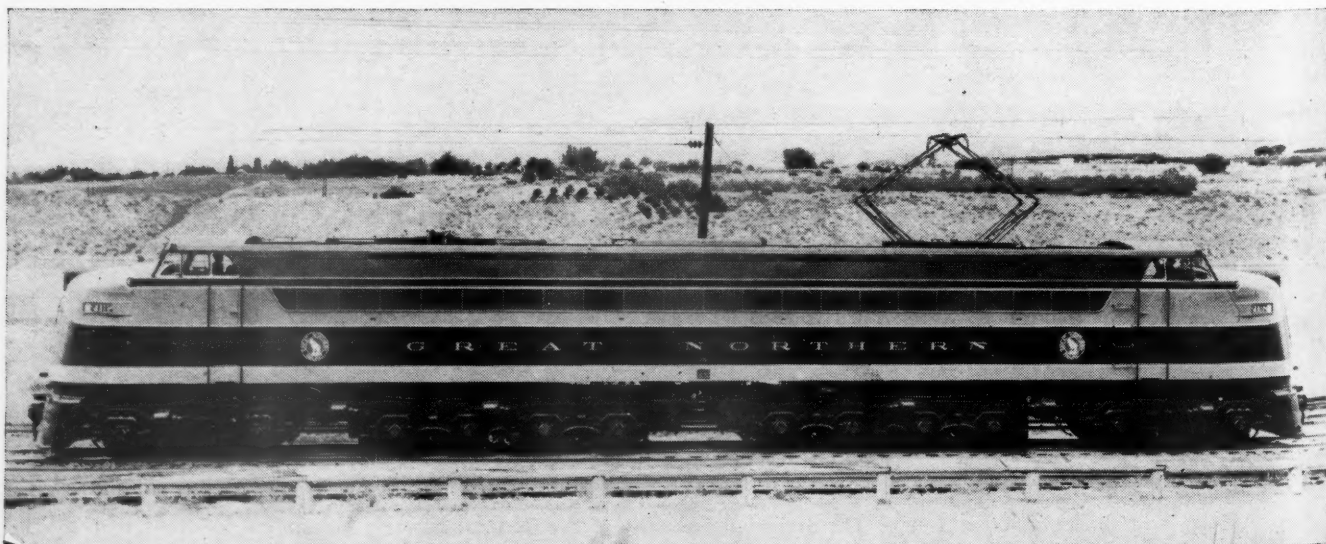
The cabs are provided with single aspect marker lights and with number boxes placed diagonally in the nose, well below the marker lights. A 14-in. headlight is mounted in the door and an oscillating headlight is mounted on the nose at each end. The oscillating headlights are operated by a special 75/12-volt d.c. dynamotor. Two air-operated horns with 8-in. diaphragms are provided on the roof of the cab. Air-push windshield wipers and sun visors are provided for each operating position. A 750-watt strip-heater is provided at each operating position for windshield defrosting. Ladder brackets between the marker lights and number boxes, and grab-handles above the windshield, facilitate cleaning the windshields.

Ventilating louvers extend the entire length of the cab between the two operating compartments. Manually operated baffles are provided on the inside of the louvers. The air outlets from the synchronous motor-generator sets and the transformer are provided with dampers so the air may be recirculated within the cab. These features provide means for minimizing the amount of snow or rain taken into the cab, and to control the temperature of the equipment. In cold weather it may be necessary to use these means to prevent condensation of atmospheric moisture on dry type insulation when going through the relatively warm tunnel.

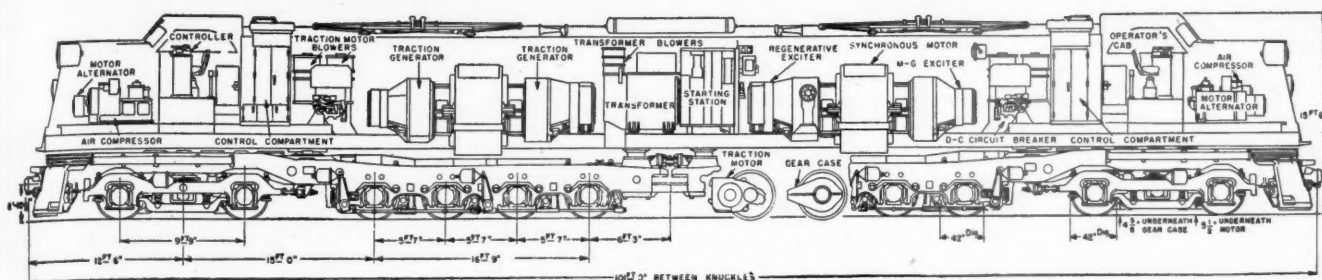
The locomotives are painted Pullman



Above—Guiding truck frame with swing bolster springs and equalizers assembled. Below—All axles of the Great Northern single-cab, motor-generator locomotive are motorized



ullman



**Above—Elevation of the locomotive showing the location of the apparatus. Below—The control position in the cab**

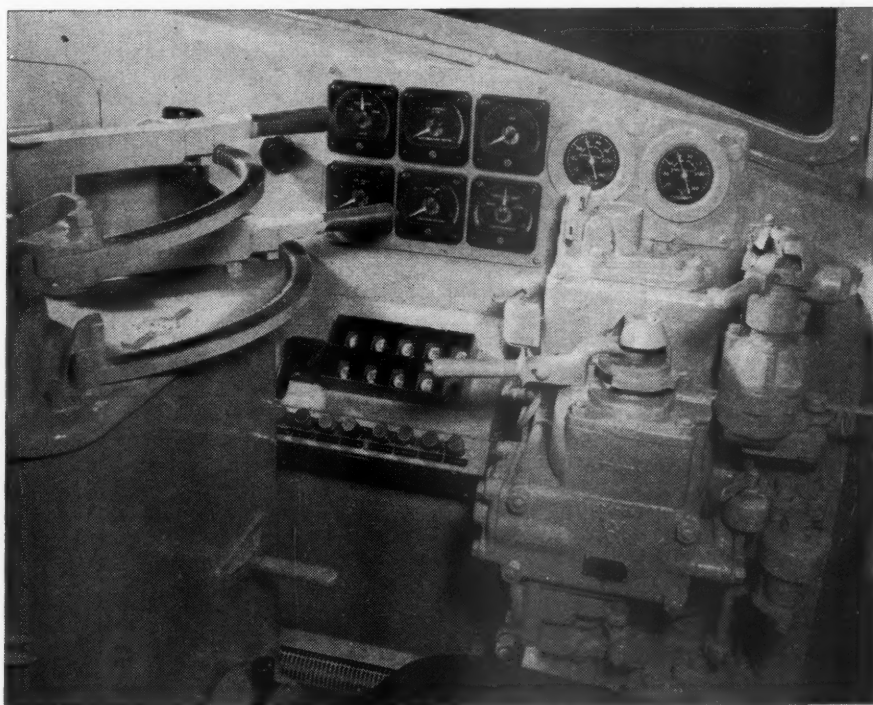
green, striped with Omaha orange in accordance with the color scheme of the Great Northern.

## Electric Equipment

Power is taken from the 11,000-volt, 25-cycle overhead contact-system by double-shoe pantographs. It is transmitted through cables in non-magnetic conduits to the primary of the forced-cooled pyranol-filled transformer which is rated 4,969 kva., 11,000/1,350 volts. A thyrite lightning arrester is mounted on flexible supports on the transformer tank and connected, through a braided shunt, to the line terminal of the primary of the transformer. The transformer is of the shell type with coils arranged edgewise in suitable groupings of high-voltage and low-voltage pancakes. They are specially braced and the tank is specially constructed to stand the shocks, vibration and weaving to which a locomotive transformer is subjected.

An induction motor-driven pump, mounted on top of the transformer, with the impeller vertically downwards and the motor windings open to the pyranol, circulates the 454 gal. (6,000 lb.) of pyranol through the windings, expansion tank and cooler. The transformer is cooled by a finned cooler using 9,000 cu. ft. of air per minute at approximately 6 in. static pressure. The air is supplied by means of two axial-flow blowers mounted vertically above the cooler. Each blower is driven by an 8-hp., 3-phase, 123-cycle, 3,610-r.p.m. induction motor which receives its power from one of the frequency-changers mounted in the noses of the locomotive cab. The line and ground ends of the high-voltage winding are brought out through Herkolite bushings on the top of the tank so that current transformers required for the short-circuit and ground-protective equipment may be conveniently located. The low-voltage terminals are brought out through heavy-current Herkolite bushings and are connected through flexible shunts and insulated bus-bars to the main contactors in the synchronous-motor control-group.

There are two 750-r.p.m., five-unit synchronous motor-generator sets installed in each locomotive. One set is



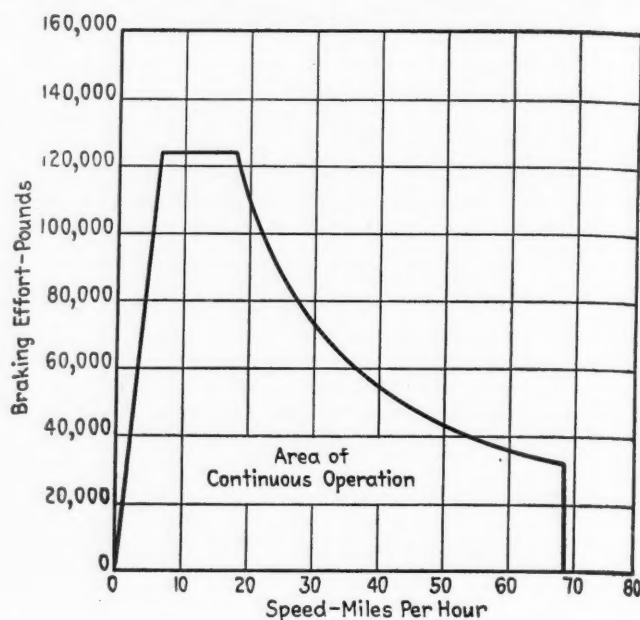
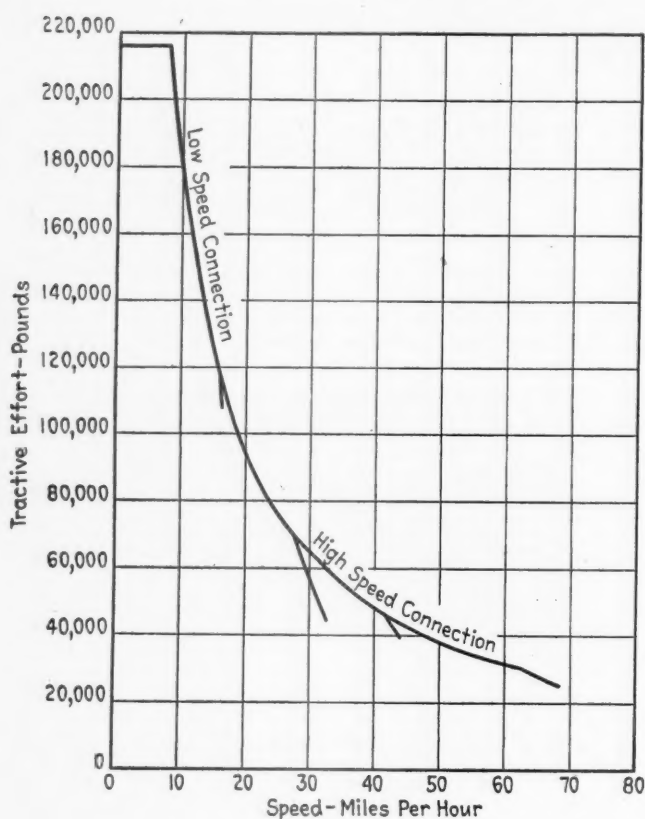
mounted on one side of the transformer and synchronous-motor control group and the other on the other side of the transformer. Each set is composed of a 3,000-hp. 1,350-volt, unity-power-factor, single-phase synchronous motor driving two traction generators and two exciters, with the synchronous motor in the middle. The a.c. machines act as motors to drive the traction generators and their respective exciters when motoring or as generators when driven by the traction generators during the regenerative-braking periods. Each traction generator is rated 700/450 volts, 1,500/2,300 amperes.

The locomotive may be operated at reduced rating with either motor-generator shut down. When both sets are operating, the four d.c. generators are operated in parallel at low locomotive speed to supply power to the traction motors. At high locomotive speed, when lower currents and higher voltages are required, the generators on each set are connected in series. The change in connection is made by a selector handle on the master controller with the main handle in the off position. The gener-

ators are used to start the synchronous motors by d.c. power from the auxiliary power set. After a certain speed is reached, as indicated by a speed switch, the synchronous motors are connected to the low-voltage taps on the transformer and brought up to speed before connecting to the running winding. This part of the sequence is controlled by slip-frequency relays connected across resistors in the synchronous motor fields.

The overhung exciters on one end of the motor-generator sets operate in parallel to provide separate excitation for the traction-motor fields. Each exciter is rated 80 kw., 25 volts, 3,200 amp. The exciters overhung from the other end of the motor-generator sets provide excitation for the synchronous motors, main traction generators, traction-motor exciters and for their own fields. Each is rated 36 kw., 45 volts, 800 amp.

The synchronous motor-generator sets supply power to 12 axle-hung traction-motors connected in two groups, with six motors in each group in parallel and the two groups in series. With six motors in parallel in each group, the oper-



Above—Speed-regenerative-braking-effort curve  
Left—Speed-tractive-force curve

ation under poor-rail conditions closely approximates that which would be obtained with all motors in parallel without the disadvantage of requiring high currents from the generators. The traction-motors are series-excited during low-speed motoring and are separately excited during high-speed motoring and during regeneration. They are rated 500 hp., 500 volts, 2,260 r.p.m. maximum speed and are equipped with 17-tooth pinions which mesh with 70-tooth solid gears mounted on the driving axles of the locomotive. The axle-lining-flange dust-guards are equipped with brush-holders for grounding the motors to the axles.

### Auxiliary Power

The power for the auxiliaries is furnished by two three-unit motor-alternator sets, one of which is mounted longitudinally in each nose compartment of the locomotive. Each set consists of an 85-hp., 1,475-r.p.m., 25-cycle, single-phase induction motor driving a 3-phase, 123-cycle, 62.5-kva. alternator and a 15-kw., 75-volt, 200-amp., d.c. generator. The three machines are mounted on the same shaft in an integral housing. The 25-cycle induction motors take power from intermediate taps of the main transformer. The 3-phase, 123-cycle alternators supply power for the four traction-motor blowers and the two transformer blowers. The d.c. generator supplies power for control, lighting, bat-

tery-charging, excitation for the alternators and for starting the main motor-generator sets. A 32-cell, 114-amp.-hr. lead-acid battery is provided.

The ventilating air for the traction motors is supplied by four axial-flow fans mounted vertically, in groups of two, at each end of the cab immediately behind the motor-control compartments. Air for all blowers and for the self-ventilated motor-generator sets is taken from the main cab of the locomotive. Air is delivered by one blower at one end to the four motors on the adjacent main truck through a flexible connection located near the cab centerplate, a sheet-metal duct on the main truck, and a flexible connection to the motors. Air is delivered by the other blower, at the same end, to the two traction motors on the swing-bolster truck, through a flexible connection located near the cab centerplate, through a duct in the main-truck casting, and flexible connections to the motors on diagonally opposite sides of the swivel-truck center-plate. This blower also supplies air to the frequency-changer set and air-compressor motor in the nose and to the control groups. The four traction-motor-blower motors are each rated 26 hp., 3,615 r.p.m., 3-phase, 123 cycles.

Two General Electric air compressors are provided, one in each nose of the locomotive. Each compressor has a displacement of 150 cu. ft. and is driven at 1,170 r.p.m. by a 38-hp., 25-cycle single-phase series motor. The brakes are con-

trolled by a double-end type 8-EL locomotive air-brake equipment arranged for multiple-unit operation.

The two operating cabs are each heated by four 1,000-watt horizontal unit heaters. Two of the heaters in each operating cab are controlled from the engineman's position and two from the helper's position. A speed recorder is provided with two independently adjustable speed governors. The drive unit is connected to the No. 2 driver.

### Control

There are two control positions, one at each end of the locomotive. The main handle of the master controller has an off position and 39 control notches. The first notch establishes connections for the direction of locomotive movement previously selected by means of the reverser handle. The other notches on the main handle control the tractive force of the locomotive when motoring or when braking. Two push-buttons are furnished by means of which either self excitation or separate excitation of the traction motors may be provided after the separate-excitation handle, located on the master controller, has been moved to the proper position and the proper indications given. The separate-excitation handle controls the separate excitation of the traction motors during motoring or braking. These three handles on the master-controller are suitable interlocked.

A selector handle on the master controller connects the d.c. generators in parallel for high-current output at low speeds, and connects them in series for high voltage and low current at high speed. The selector handle can only be moved from one position to the other if the main handle is in the off position so that there is no power on the locomotive.

When the motors are in series excitation their tractive force is controlled by varying the field strength of the main traction generators. The motors may be operated with series excitation up to 17 m.p.h. with the main traction generators in parallel (low-speed connection) and up to 44 m.p.h. with the two generators on each set in series (high-speed connection).

### Exciter Operation

Higher speeds may be obtained in separate excitation with the traction generators in either the high-speed or low-speed connection. Separate excitation may be established by first reducing the traction-motor currents to values that can be handled by the regenerative exciters. The exciters are then inserted into the series connection of the groups of traction-motors. The field of the exciter is varied by the separate-excitation handle until the equalizing voltmeter indicates zero. The separate-excitation button is then pushed by the operator to close the stabilizing-resistor switches in the field circuits of the traction motors to establish separate excitation. By controlling the excitation of the exciters, the ratio of field amperes to armature amperes may be varied to give the equivalent of weak-field control when motoring. The stabilizing resistors provide a return path for the separate-excitation current, help maintain current balance between motors with different wheel diameters and assist traction-motor stability when separately excited.

The control is so arranged that, when the locomotive is in separate excitation, the field strength of the traction motors may be increased to make them regenerate without opening any load circuits. Thus the locomotive can be made to float from motoring to regenerative-braking and back again when negotiating a rolling profile at relatively high speed. If it is desired to return the locomotive to series operation of the traction motors when motoring, the separate-excitation handle is backed off until the field amperes equal the traction amperes. The operator then pushes the series-excitation button and the stabilizing-resistor switches drop out. The separate-excitation handle is then moved to the off position and the exciter armature is short-circuited with only commutator-conditioning current passing through the exciters.

The synchronous-motor fields are ex-

cited by 45-volt exciters controlled by voltage regulators. The power factor of the synchronous motor will vary with the load with a fixed field excitation and given line voltage. Three steps of field excitation are provided depending on the position of the main handle on the master controller. These values of excitation were selected so that the locomotive will take power from the line at approximately unity power factor under average operating conditions.

Indicating lights are provided at the operator's position to show the operation of warning and protective devices and to indicate that certain control operations have been performed. A cut-out switch enables the operator to control an emergency trip of the control circuits.

Flush-mounted meters have concealed lighting. The intensity of the lighting of the meters may be adjusted by the operator to suit his particular needs. A meter-transfer switch is provided so that four indicating meters at each position indicate traction-motor armature current, traction-motor field current, equalizing volts and synchronous-motor current. A voltmeter shows the voltage of one of the traction generators. A speed indicator and two air gages complete the instrument panel.

### De Luxe Service

(Continued from page 50)

tubes and emergency incandescent lights.

All of the cars have four-wheel trucks, with single equalizers. There are coil springs under the bolsters as well as on the equalizers. The combined spring deflection is approximately 10 in. The

truck bolsters are guided by bolster anchor rods and their vertical motion is dampened by shock absorbers. A shock absorber is also installed between the end transom of the truck frame and the car body to check vertical nosing of the trucks.

Hyatt roller-bearing journal boxes are mounted on all of the axles. The wheels are 36 in. in diameter, of high-carbon rolled steel. The treads are cylindrical.

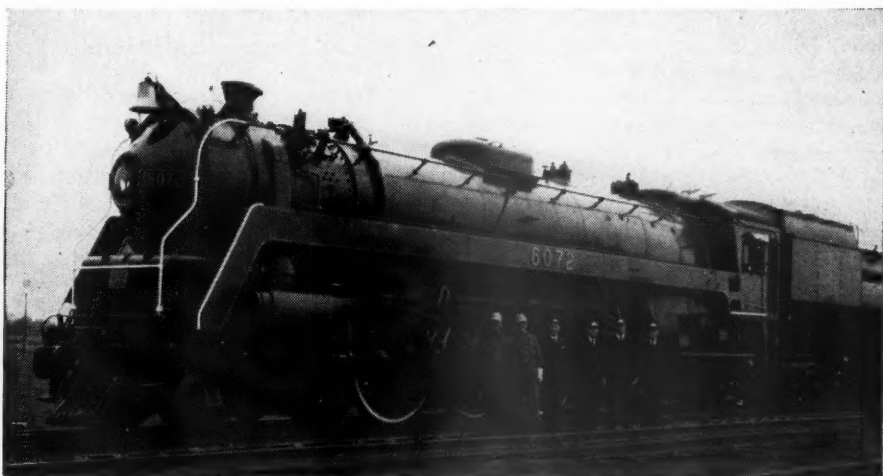
The frames and bolsters are alloy-steel castings. Center plates are integral with the bolsters. The frames are normalized and tempered, and all pin holes are fitted with case hardened steel bushings. The bolsters are case hardened. The center pins are the Miner locking type, 4 in. in diameter.

Rubber pads are placed under the body center plate and the side bearings. Rubber is also employed as bolster end bumper pads. Fabreeka pads are placed between the tops of the journal boxes and the ends of the equalizers.

The modified HSC air brakes were furnished by the New York Air Brake Company. The equipment is designed for a maximum of 150 per cent braking at 60 lb. cylinder pressure. The electric control features are omitted, but if desired may be applied at a later date. The trucks are fitted with Unit Cylinder clasp brakes, with two cylinders per truck.

Each car is equipped with one National hand brake of the lever type. This is mounted on a collision post and operates through the clasp brakes on the adjacent truck. It is designed to produce a braking ratio of 25 per cent of the loaded weight of the car.

The draft gears are Miner A-4XB and the buffer gears Miner B-26-X. National Malleable A. A. R. standard tight lock couplers are applied.



Photograph courtesy Canadian National Railways

The Canadian National locomotive and crew which handled President Truman's special train from Rouses Point, N. Y., to Ottawa when the chief executive visited our northern neighbor recently

# European Railway and General Conditions Badly Scrambled

[Returning from an extended tour of England and Western Europe, where he was a delegate of the United States government at the recent International Railway Congress in Switzerland, Mr. Poor has written an interesting and comprehensive report of his experiences and observations of the social, economic and political situations in the countries visited, from which the following is abstracted—EDITOR.]

**T**HE railroads in Great Britain, in fact the entire transport industry, are being nationalized, and will be taken over by the government on January 1, 1948. Payment to the owners is based on the price quoted in the stock market as of a certain date. This payment is being made in British government securities, on which the interest is being paid regularly.

The British railroads went through the war with great credit to themselves, and it was urgently hoped by the railroad people that, as a result, they would be allowed to operate without nationalization. However, the policy of the Labor government is such that all basic industries are being nationalized. The next industry scheduled to be taken over is the steel industry.

## Lines in Good Condition

No definite statement has been made as to the policy of the government after it assumes control of the transport industry. This means that every high officer of the railroads is very much concerned. Sir James Milne, president of the Great Western, and Sir Charles Newton, president of the London & Northeastern, are planning to retire. Unless he is given an important position under the government, Sir William Wood, president of the London, Midland & Scottish, who is 64 years old and has but one more year of service, will also retire.

The British railroads are well operated and maintained. Their equipment is in good shape, as is their track. They use almost exclusively what is called the bullhead rail, which rests on very heavy chairs on the ties and is held in line by wood fillers placed between the edges of the plates and web of the rail. One reason the track is easy to maintain is that they have no wheel loads such as we have in the United States. Their freight cars—which they call "goods wagons"—are four-wheel cars no larger than ordinary trucks seen on the highway.

By **FRED A. POOR**

President, Poor & Co., Chicago

The L. M. & S. is making tests with the American type flat-bottom rail, using American type plates and spikes. This road has about 30 mi. of such track now and are buying another 25 or 30 mi. which will be laid as soon as materials can be procured.

Coaches of the British railroads are in good shape. These roads operate few sleepers, as the only one using them is the L. M. & S. to Scotland. The carriers once offered three classes of passenger travel—first, second and third—but have now eliminated the second class. The third-class fare is about one-half to two-thirds the first-class fare. The only difference in the accommodations offered by these services is that the third-class compartments have seats for four on each side, while the first class have seats for three and better upholstery.

The L. M. & S. has ordered five Diesel locomotives for its run to Scotland, but the consensus among the railroad people is that the railroads will all be electrified. A large number of the suburban railways are already electrified.

Contrary to the common opinion that the British railroads are not large companies, Sir William Wood of the L. M. & S. states that his railroad has twice as many employees as the Pennsylvania. Other railroads, like the Southern and the Great Western, have very intensive traffic and large numbers of employees.

## The French Railroads

In France, the railroads are all owned and operated by the government. They use some bullhead rail, but mostly flat-bottom rail. Neither the French track nor rolling stock is in as good condition as that in Great Britain. Their freight cars are of the same general type as those used in England, but they have no wheel loads such as we have in the United States.

During the war the French lost a great deal of their passenger and freight equipment, which was commandeered by the Germans. Some of this has been recovered, and I also noticed some German freight cars on French tracks.

The French railway union is strongly dominated by communists. A recent strike stopped every railroad in the

country, and was settled by awarding higher wages to employees.

Most of the railroads of Switzerland are electrified. They are nationalized to a large extent, but their equipment and American-type track are in good shape. The Swiss railroads are prosperous, their service is good, and their management seems to have no trouble with strikes or with unions.

## The Political Picture

Although the Labor government's restrictive programs and bungling are hastening the day of reckoning, Britain was on the skids before the war. Between 1913 and 1929, total exports from the United Kingdom fell in volume by about one-sixth, despite a concurrent increase in world trade. As an example of how one of the big companies feels in this matter, it is building a large plant in South Africa, where labor is cheap and taxes are low. The firm's managing director said that he could deliver his goods for export from South Africa just as cheaply as he could from England, and that his costs would be very materially less than in England. This move, I believe, is due in large part to the plan to nationalize steel.

There is a shortage of steel in France, with deliveries slow. While France does not do the export business done by England, it can not get enough steel for its own domestic use. In Switzerland, on the other hand, the various industries seem to get plenty of material, and are able to furnish their domestic customers with what they want.

Although there is little export business in that country, the various industries operating there appear to be prosperous and satisfied.

The political situation in England is very bad. The government is made up largely of former union leaders. Organizers are confused and a large number of them are incompetent. They have one strong man in the cabinet—Foreign Minister Ernest Bevin. Hugh Dalton, chancellor of the exchequer, is also an able man. One hears little about Prime Minister Attlee, and I was unable to judge his qualifications.

I do not think there is any chance of overthrowing the present government in England until their next election. The Labor party is strongly entrenched in power. The labor people are believing promises made to them to the effect that the party expects to take money from those who have it and give it to those who have not. In the past few months they have held two or three bye-elections, and in each case a Labor candidate has been elected. The Labor party has a very substantial majority in the House of Commons,

(Continued on page 64)

# Tie Renewals Slump 14.4 Per Cent

Data reported by A. R. E. A. show decreased replacements in 1946 compared with previous year because of adverse factors that included a shortage of labor and the necessity of retrenching

**R**EFLECTING various unfavorable factors that prevailed in 1946, including a shortage of track labor in some localities due partly to the loss of a large force of Mexican workers early in the year, and enforced retrenchment due to increased labor costs without compensating increases in rates, only 55 Class I roads in the United States and one in Canada inserted more ties per mile of maintained track last year than they did in 1945, while 70 roads in the two countries inserted fewer ties and four inserted the same number.

As a net result of these operations, the Class I roads in the United States inserted 37,269,944 new wood crossties, 290,743 secondhand ties and 1,696 ties other than wood, making a grand total of 37,562,383 ties of all classes inserted in 1946. This figure represents a decrease of 6,349,830 ties, or 14.4 per cent, as compared with total insertions in 1945. Also, the renewals for 1946 were the lowest for any year for which records are available, with the single exception of 1933 when insertions amounted to 37,295,716 ties. The three Canadian roads reporting inserted 7,417,303 new wood crossties in 1946, compared with 7,544,198 ties in 1945, a decrease of 126,895.

## Low for Many Years

These and other important comparisons can be drawn from the tabulation of statistics relating to tie renewals compiled for the Committee on Ties of the American Railway Engineering Association by the Bureau of Railway Economics from reports made to the Interstate Commerce Commission by the roads of the United States, and directly to the bureau by the Canadian roads. Figures are reported for 131 roads (including one reporting for the first time), of which 128 are in the United States and 3 in Canada. These statistics, which have been reported to the association by the Tie committee, are reproduced here in condensed form.

As a result of the decrease of the total number of crossties inserted in 1946 as compared with the previous year the average number of new wood ties placed per mile of maintained track dropped from 132 to 113, a reduction of 19. Like the total for 1946, the

average per mile reached a new low for many years, being only slightly above the low level of the depression years.

## Some Important Changes

Noteworthy changes from 1945 to 1946 in the number of new wood ties inserted per mile on individual roads included the following increases: Bangor & Aroostook, from 110 to 201; St. Louis, San Francisco & Texas, from 61 to 122; Georgia & Florida, from 195 to 253; Alton (now part of the G. M. & O.), from 189 to 247; Burlington-Rock Island, from 84 to 137; and Georgia Southern & Florida, from 143 to 195.

Outstanding decreases in the number of ties inserted per mile of track were as follows: Chicago & Illinois Midland, from 329 to 34; Missouri & Arkansas, from 344 to 99; Western Pacific, from 264 to 123; Richmond, Fredericksburg & Potomac, from 215 to 98; Spokane, Portland & Seattle, from 233 to 119; Louisiana & Arkansas, from 130 to 25; Northwestern Pacific, from 237 to 142; and New York Connecting, from 132 to 39.

The four roads that placed the same number of ties per mile as in 1945 were the Bessemer & Lake Erie (30), the Colorado & Southern (103), the Canadian Pacific (149), and the Southern (136).

Comparisons by regions show that increases in the number of new wood ties inserted per mile in 1946 occurred in the New England region (72 to 85) and in the Pocahontas region (89 to 91). Decreases occurred in the Great Lakes region (107 to 96); the Central Eastern region (115 to 102); the Northwestern region (136 to 104); the Central Western region (136 to 93); and the Southwestern region (124 to 115). No change took place in the Southern region where the average remained at 186 ties per mile.

The five-year averages by regions were: New England, 82; Great Lakes, 115; Central Eastern, 117; Pocahontas, 89; Southern, 186; Northwestern, 133; Central Western, 126; and Southwestern, 155. For the United States as a whole the five-year average was 134.

Further analysis of these statistics shows that in 1946 a total of 63 railroads used treated ties exclusively, this



A section of the treated tie storage yard of the Forest Products Treating Company's plant at The Dalles, Ore.

being a slight drop from the 66 companies that reported using such ties exclusively in 1945. Only three roads did not use any treated ties in 1946. On 40 other roads more than 80 per cent of the ties inserted for replacement were given preservative treatment; on eight roads the percentage of treated ties ranged from 60 to 80; on seven roads the range was from 40 to 60 per cent; and on five roads it was from 20 to 40 per cent. On only five roads was the percentage of treated ties used less than 20.

The number of new treated wood ties installed by the reporting railroads in the United States in 1946 was 35,429,179, a decrease of 5,854,010 ties, or 14.1 per cent, as compared with 1945. On a relative basis, however, there was a

further gain in the number of treated ties used. Specifically, the ratio of the number of treated ties used to the total increased from 94.0 per cent in 1945 to 94.3 per cent in 1946. The latter figure compares with 93.4 per cent in 1944, with 91 per cent in 1943, with 89.6 per cent in 1942, and with 87.5 per cent in 1941.

As against the decline of 14.1 per cent in treated ties installed in 1946, there was a decrease of 24.8 per cent in the number of untreated wood ties installed. On the other hand, the number of secondhand and substitute ties used showed an increase of 38.3 per cent (from 180,421 to 292,439). While such ties represent only a small proportion of the total, such a substantial increase in their use is perhaps indicative of the

fact that greater care is being employed in determining the extent to which a tie may be good for further use after its removal from main track.

Two measures of tie-renewal policies are shown in the last two columns of the accompanying table. One of these gives the cost of tie renewals per mile of maintained track, while the final column gives the cost of wood crossties per thousand equated gross ton-miles. In comparing cost figures considerable caution should be observed due to the wide variation in conditions that exists at present in different sections of the country.

The data in this table covers a total of 330,630.31 mi. of maintained track compared with 331,200.93 mi. in 1945, a decrease of 570.62 mi.

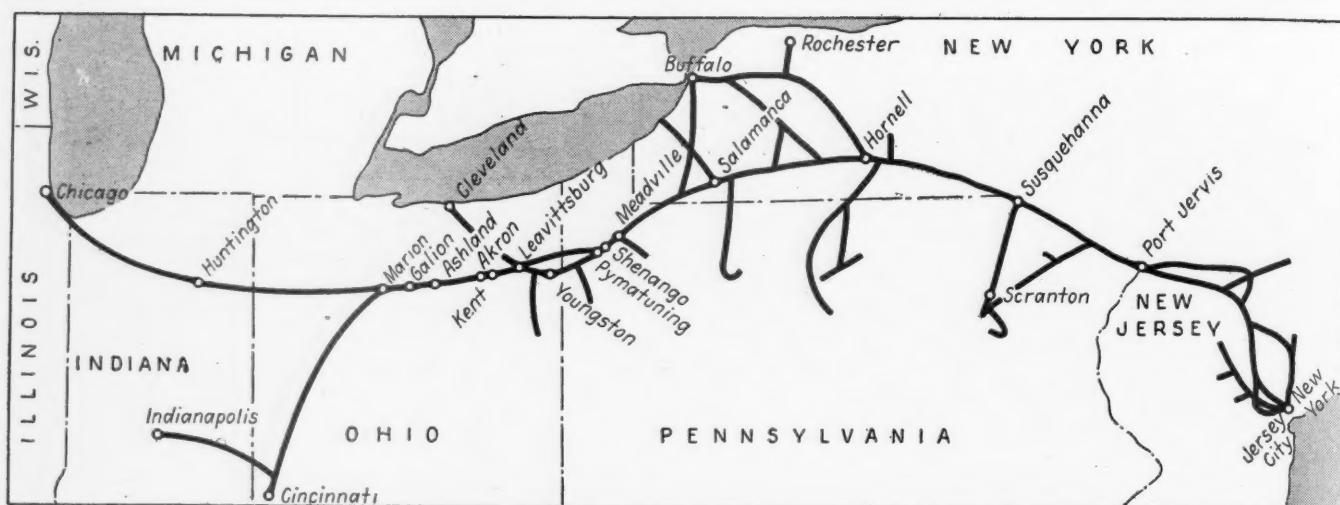
**Statistics of Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1946**

Road	Miles of maintained track occupied by crossties	Total number of new wood crossties laid in replacement in 1946	Number of wood crosstie renewals per mile of maintained track		Per cent of wood crosstie renewals to all ties in tracks		New wood ties untreated (U)		New wood ties treated (T)		Estimated total crossties in all maintained tracks	Cost of new wood crosstie renewals per mile of maintained track	Cost of new wood crosstie renewals per thousand equated gross ton-miles (cents)
			1946	5 year average	1946	5 year average	Per cent applied	Average cost††	Per cent applied	Average cost††			
New England Region:													
Bang. & Aroos.....	826.80	165,912	201	138	7.0	4.8	46.9	\$1.41	53.1	\$2.97	2,376,118	\$449	19.54
B. & M.....	2,893.00	137,274	47	67	1.6	2.2	...	...	100.0	2.62	8,534,400	124	2.07
C. N. R. (lines in N. E.)...	237.61	20,874	88	107	2.8	3.4	3.4	0.93	96.6	1.82	752,236	157	6.12
C. P. R. (lines in Me.).....	215.85	17,312	80	71	2.6	2.3	3.5	1.46	96.5	2.17	671,603	172	1.79
C. P. R. (lines in Vt.).....	125.35	11,670	93	94	3.1	3.1	...	...	100.0	1.98	377,467	184	3.33
Central Vt.....	495.04	20,440	41	33	1.4	1.1	...	...	94.1*	2.23	1,463,000	92	1.84
Me. Cent.....	1,213.88	101,894	84	119	2.8	3.9	33.6	1.38	59.5*	3.04	3,681,400	205	5.47
N. Y. Connecting.....	25.90	1,000	39	135	1.2	4.3	...	...	100.0	3.20	81,641	123	0.79
N. Y. N. H. & H.....	3,818.20	380,647	100	79	3.2	2.5	...	...	100.0	2.61	11,972,160	261	3.64
Rutland.....	486.19	24,617	51	45	1.6	1.4	...	...	98.9*	2.37	1,511,500	120	3.48
Total.....	10,337.82	881,640	85	82	2.8	2.7	13.0	1.40	85.9*	2.63	31,421,525	211	3.69
Great Lakes Region:													
Ann Arbor.....	402.69	42,076	104	96	3.4	3.2	...	...	100.0	2.39	1,221,344	249	5.83
Camb. & Ind.....	56.43	6,199	110	212	3.8	7.6	...	...	100.0	2.75	162,327	303	12.80
D. & H.....	1,358.21	181,535	134	132	4.3	4.3	...	1.33	99.9*	2.89	4,217,658	386	3.60
D. L. & W.....	2,205.92	169,652	77	79	2.7	2.7	...	...	95.1*	2.62	6,397,628	202	2.54
Det. & Mack.....	276.43	24,309	88	97	2.9	3.3	74.2	1.18	25.8	2.06	828,397	124	11.88
D. & T. Shore Line.....	148.81	7,843	53	80	1.7	2.6	...	...	88.6*	2.63	449,069	138	2.90
Erie.....	4,713.85	290,020	62	77	2.1	2.6	00.1	0.91	99.9	2.60	13,957,227	160	1.80
G. T. W.....	1,849.03	259,014	140	147	4.4	4.7	...	...	100.0	2.60	5,857,637	365	6.73
L. & H. R.....	111.79	11,030	99	98	3.7	3.6	...	...	89.6*	3.07	300,500	303	3.60
L. & N. E.....	257.87	15,534	60	55	2.0	1.8	...	...	100.0	2.84	780,173	171	3.99
L. V.....	2,615.18	233,309	89	81	3.0	2.7	...	...	100.0	2.81	7,786,409	251	3.91
Monongahela.....	238.03	21,627	91	132	3.1	4.5	...	...	100.0	2.61	694,913	237	4.57
Montour.....	72.39	5,662	78	83	2.7	2.9	100.0	2.20	...	...	208,494	172	3.83
N. Y. C.....	20,967.73	2,098,048	100	126	3.2	4.1	...	1.95	99.8*	2.62	64,688,258	262	2.93
N. Y. C. & St. L.....	2,544.27	383,650	151	152	4.8	4.8	...	...	100.0	2.71	8,014,328	409	4.21
N. Y. O. & W.....	716.98	294	**	6	...	0.2	...	...	6.5*	2.65	2,036,286	1	0.03
N. Y. S. & W.....	214.76	7,113	33	45	1.1	1.5	...	...	100.0	2.40	624,900	79	4.47
P. M.....	2,576.79	213,571	83	140	2.8	4.7	...	...	100.0	2.32	7,681,967	193	3.59
P. & L. E.....	834.68	84,726	102	102	3.4	3.4	...	...	100.0	2.31	2,520,213	234	3.96
P. & S.....	115.46	20,169	175	185	6.2	6.5	00.4	1.00	96.6*	2.01	327,218	524	18.36
P. & W. Va.....	182.14	20,058	110	152	3.6	5.0	...	...	100.0	3.12	554,258	343	5.97
P. S. & N.....	218.84	1,475	7	69	0.2	2.4	21.3	1.32	25.8*	2.42	642,800	13	2.12
Wabash.....	3,159.90	324,026	103	120	3.3	3.9	...	...	100.0	2.46	9,845,181	252	3.07
Total.....	45,838.18	4,420,940	96	115	3.2	3.8	00.6	1.43	99.0*	2.62	139,777,185	252	3.13
Central Eastern Region:													
A. C. & Y.....	214.86	57,750	269	237	9.3	8.2	84.7	2.11	15.3	1.99	618,797	563	13.95
B. & O.....	10,348.74	1,273,716	123	162	4.3	5.7	...	...	100.0	2.25	29,509,919	277	3.01
B. & L. E.....	487.31	14,562	30	48	1.0	1.6	...	...	100.0	3.26	1,515,284	97	1.21
C. of N. J.....	932.72	122,711	132	96	4.7	3.4	...	...	100.0	2.46	2,621,910	323	3.84
C. of Pa.....	473.07	32,242	68	...	2.4	...	...	...	100.0	2.59	1,329,936	176	5.70
C. & E. I.....	1,290.05	182,553	142	123	4.6	3.9	...	...	100.0	2.29	4,000,316	324	5.39
C. & I. M.....	169.96	5,752	34	159	1.2	5.3	...	...	100.0	2.79	496,371	94	1.19
C. I. & L.....	731.86	52,840	72	65	2.3	2.1	...	...	98.7*	2.16	2,268,841	156	3.84
D. T. & L.....	602.77	36,414	60	53	2.1	1.8	5.2	0.89	94.8	2.17	1,735,977	127	3.73
E. J. & E.....	854.46	84,430	99	113	3.2	3.7	...	...	91.5*	2.20	2,636,678	218	5.05
Ill. Term.....	633.72	51,064	81	84	2.7	2.8	1.6	1.52	98.4	1.97	1,901,160	158	8.12
Long Island.....	795.33	69,003	87	132	3.0	4.6	...	...	100.0	3.11	2,271,314	270	4.51
Mo.-Ill.....	214.94	41,146	191	209	6.1	6.7	00.1	0.76	99.9	2.06	673,610	393	19.24
Penna.....	21,384.51	1,968,185	92	102	3.2	3.6	...	...	99.9*	2.49	61,032,324	229	2.04
P.-R. Seashore Lines.....	634.90	58,500	92	81	3.4	3.0	...	...	100.0	2.99	1,725,247	276	8.89
Reading.....	2,881.64	320,163	111	114	4.0	4.0	...	...	100.0	2.60	7,989,733	289	3.76
S. I. R. T.....	92.47	10,012	108	74	4.2	2.8	...	...	100.0	2.50	236,720	270	9.29
W. M.....	1,145.26	82,617	72	96	2.5	3.3	1.1	1.91	98.9	2.54	3,322,224	183	2.37
W. & L. E.....	836.31	77,388	93	121	3.1	4.0	...	...	95.3*	2.38	2,511,246	220	3.97
Total.....	44,724.88	4,541,048	102	117	3.5	4.1	1.2	2.05	98.5*	2.42	128,397,607	245	2.66
Pocahontas Region:													
C. & O.....	5,132.50	500,521	98	95	3.2	3.1	...	...	100.0	2.49	15,765,784	242	1.83
N. & W.....	4,276.41	365,643	86	67	2.8	2.1	...	...	98.9*	2.24	13,256,871	191	1.74
R. F. & P.....	401.79	39,412	98	238	3.4	8.3	...	...	94.8*	2.36	1,162,500	231	1.27
Va.....	918.65	74,221	81	95	2.6	3.1	...	...	100.0	1.88	2,824,240	152	1.64
Total.....	10,729.35	979,797	91	89	3.0	2.9	...	...	99.4*	2.34	33,009,395	214	1.76

# Statistics of Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1946 (Continued)

Road	Miles of maintained track occupied by crossties	Total number of new wood crossties laid in replacement in 1946	Number of wood crosstie renewals per mile of maintained track		Per cent of wood crosstie renewals to all ties in tracks		New wood ties untreated (U)		New wood ties treated (T)		Estimated total crossties in all maintained tracks	Cost of new wood crosstie renewals per mile of maintained track	Cost of new wood crosstie renewals per thousand square miles (cents)
			1946	5 year average	1946	5 year average	Per cent applied	Average cost††	Per cent applied	Average cost††			
Southern Region:													
A. G. S.	551.61	125,065	227	151	7.5	5.0	...	...	100.0	2.62	1,665,154	594	6.96
A. & W. P.	141.11	30,141	214	229	6.9	7.4	30.8	1.91	69.2	2.57	436,027	506	7.39
A. C. L. (inc. A. B. & C.)	7,424.78	2,134,701	288	213	9.6	7.2	8.6	1.68	91.4	2.51	22,274,340	701	12.33
C. of G.	2,265.92	348,251	154	152	5.2	5.1	0.1	1.40	99.9	1.94	6,696,776	298	6.39
C. & W. C.	426.77	84,136	197	199	6.8	6.9	6.4	2.14	93.6	2.77	1,233,037	539	20.32
C. N. O. & T. P.	770.64	72,016	93	63	3.2	2.1	0.1	1.78	99.9	2.58	2,251,316	241	1.89
Clinchfield	398.39	68,776	173	164	5.7	5.4	37.4	1.46	62.6	2.27	1,211,102	340	3.29
Col. & Green	205.80	31,656	154	169	4.9	5.4	0.1	0.58	99.9	2.24	651,974	344	20.83
F. E. C.	1,262.06	224,235	178	170	6.2	5.9	12.7	1.67	87.3	2.66	3,628,499	450	7.34
Ga.	428.25	56,191	128	209	4.2	6.8	42.4	1.86	57.6	2.51	1,342,315	287	5.53
G. & F.	459.94	116,485	253	271	9.4	10.1	100.0	1.56	...	...	1,241,838	396	26.23
G. S. & F.	464.84	90,523	195	144	6.2	4.6	83.8	1.52	16.2	2.70	1,462,777	334	8.09
G. M. & O.	2,044.37	438,747	215	279	6.8	8.8	1.3	1.58	92.2*	2.21	6,476,561	473	8.98
I. C. (incl. G. & S. I. & Y. & M. V.)	9,840.22	2,044,959	208	213	6.8	7.0	...	1.88	99.9*	2.27	30,013,112	472	7.09
L. & N.	6,721.44	872,514	130	149	4.5	5.2	...	1.02	99.9	2.21	19,241,031	287	3.66
Miss. Cent.	171.83	16,787	98	148	3.1	4.7	...	1.07	99.9	2.17	550,346	211	14.68
N. C. & St. L.	1,447.99	178,751	123	172	4.5	6.3	...	...	100.0	2.33	3,984,868	288	4.41
N. O. & N. E.	289.39	69,076	239	192	8.3	6.6	...	...	100.0	2.73	827,920	651	6.94
Nor. Sou.	852.60	217,429	255	285	8.8	9.6	54.1	1.53	45.9	2.57	2,484,507	511	22.57
S. A. L.	5,310.00	928,605	175	189	5.8	6.2	1.7	1.62	98.3	2.33	16,090,701	404	5.86
Southern	8,600.49	1,167,337	136	152	4.4	4.9	1.0	1.56	99.0	2.81	26,603,380	380	5.21
Tenn. Cent.	341.94	46,863	137	194	4.5	6.4	35.4	1.41	64.6	2.34	1,035,394	275	9.80
W. of Ala.	184.74	33,858	183	228	6.0	7.5	44.8	1.89	55.2	2.58	562,280	416	7.17
Total	50,624.12	9,397,102	186	186	6.2	6.2	6.9	1.61	93.0*	2.41	151,965,255	437	6.69
Northwestern Region:													
C. & N. W.	11,199.00	1,354,134	121	119	4.1	4.0	2.0	1.19	98.0	2.00	33,195,827	240	5.47
C. G. W.	1,876.22	290,654	155	144	5.2	4.8	37.1	1.97	62.9	2.63	5,563,363	370	6.60
C. M. St. P. & P.	13,551.63	1,481,623	109	149	3.5	4.8	7.3	0.45	92.7	2.07	41,939,696	213	4.37
C. St. P. M. & O.	2,149.47	240,396	112	135	3.8	4.6	1.2	1.08	98.8	2.27	6,373,105	253	6.55
D. M. & I. R.	1,080.07	69,636	64	90	2.2	3.0	10.7	1.24	89.3	2.16	3,217,529	133	2.34
D. S. S. & A.	518.74	73,852	142	151	4.7	5.1	18.7	1.24	81.3	2.08	1,556,220	273	11.60
D. W. & P.	207.00	60,996	295	334	10.0	11.4	28.7	1.40	71.3	1.91	607,707	521	13.35
G. N.	10,223.48	976,646	96	144	3.1	4.7	1.4	0.87	95.2*	1.87	31,477,737	177	3.32
G. B. & W.	282.47	39,979	142	254	4.9	8.7	49.3	1.41	50.7	3.06	813,514	318	11.95
L. S. & I.	237.55	35,794	151	142	5.0	4.7	46.8	1.42	53.2	2.62	712,650	310	45.35
M. & St. L.	1,564.72	173,716	111	145	3.7	4.8	22.9	1.27	77.1	2.06	4,724,970	209	8.48
M. St. P. & S. S. M. (incl. Wis. C.)	4,801.13	497,402	104	98	3.5	3.3	7.9	1.06	92.1	2.02	14,182,878	201	6.02
N. P.	9,268.93	562,095	61	103	2.1	3.6	1.2	1.12	98.8	1.81	26,906,844	109	2.14
Spok. Int.	177.20	52,066	294	365	10.1	12.6	100.0	1.22	...	...	514,765	358	20.35
S. P. & S.	1,124.51	133,490	119	256	3.8	8.4	3.6	0.24	96.4	2.21	3,485,981	253	4.76
Total	58,262.12	6,042,479	104	133	3.4	4.4	7.9	1.21	91.5*	2.02	175,272,786	203	4.36
Central Western Region:													
Alton	1,487.91	367,999	247	198	8.2	6.5	22.7	1.85	76.7*	2.82	4,487,833	643	11.10
A. T. & S. F.	19,223.93	1,540,131	80	89	2.6	2.9	...	2.05	99.9	1.83	58,383,075	147	1.82
C. B. & Q.	11,896.80	1,501,502	126	171	4.1	5.5	...	...	91.7*	2.05	36,737,319	258	4.67
C. R. J. & P.	9,511.12	1,036,235	109	128	3.6	4.3	...	...	100.0	2.17	28,516,625	236	4.03
C. & S.	831.93	85,786	103	102	3.4	3.4	...	...	95.7*	2.16	2,495,790	222	4.97
C. & W.	108.21	4,294	40	66	1.4	2.3	...	...	100.0	2.95	312,103	117	53.87
D. & R. G. W.	3,136.34	110,771	35	35	1.1	1.1	...	...	65.1*	2.19	9,770,300	77	1.36
D. & S. L.	324.92	54,895	169	182	5.3	6.0	...	...	100.0	2.27	1,039,840	384	13.87
F. W. & D. C.	1,032.07	158,075	153	113	5.1	3.8	...	...	97.9*	2.15	3,072,292	329	8.42
Northwestern Pac.	421.94	60,117	142	224	4.9	7.7	77.2	1.79	22.8	1.64	1,221,611	251	10.30
S. P. Pac. Lines	11,868.73	910,429	77	122	2.5	3.9	8.6	1.45	91.1*	1.87	36,838,321	141	1.28
T. P. & W.	...	...	...	...	...	...	...	...	...	...	...	...	...
U. P.	13,151.29	915,219	70	146	2.5	5.2	0.6	1.30	99.4	1.76	37,161,770	123	1.24
Utah	71.13	6,060	85	72	3.0	2.5	3.1	1.32	88.9*	2.56	202,261	214	3.61
W. P.	1,528.58	187,762	123	196	4.1	6.5	64.3	1.71	35.6*	2.56	4,575,948	247	2.67
Total	74,594.90	6,939,275	93	126	3.1	4.2	4.7	1.69	92.4*	2.00	224,815,088	185	2.34
Southwestern Region:													
B. S. L. & W.	148.86	27,077	182	188	6.1	6.3	...	...	100.0	2.17	443,200	395	3.19
B. R. I.	178.24	24,464	137	90	4.4	2.9	...	...	100.0	2.13	557,891	292	5.58
I. G. N.	1,419.52	201,372	142	122	4.7	4.1	...	...	100.0	2.22	4,254,000	315	5.19
K. C. S.	1,245.87	69,680	56	255	1.8	8.0	...	1.53	99.8*	2.02	3,945,935	113	1.51
K. O. & G.	350.07	19,194	55	47	1.9	1.6	...	...	100.0	2.12	1,036,207	116	3.31
L. & A.	867.45	21,838	25	370	0.8	11.4	...	...	100.0	2.02	2,823,337	51	1.30
M. V.	356.86	21,779	61	56	2.1	1.9	...	...	100.0	2.06	1,056,245	126	11.09
M. & A.	358.50	35,410	99	303	3.2	9.7	73.2	1.41	26.3*	1.65	1,116,201	145	14.53
M. K. T.	3,905.83	357,871	92	244	2.9	7.7	...	...	100.0	2.14	12,291,200	196	3.95
M. P.	8,905.61	981,497	110	109	3.6	3.5	0.4	1.35	99.6	2.06	27,477,621	226	3.30
N. O. T. & M.	224.41	30,832	137	177	4.5	5.8	...	...	100.0	2.18	686,500	300	4.71
O. C. A. A.	138.25	34,311	248	247	8.6	8.6	2.6	1.17	97.4	2.13	398,160	522	55.21
St. L. B. & M.	762.26	119,909	157	159	5.2	5.3	...	...	100.0	2.12	2,305,700	334	5.60
St. L. S. F.	6,220.99	687,744	111	121	3.5	3.8	21.1	1.52	78.9	2.02	19,584,833	212	4.16
St. L. S. F. & T.	154.29	18,798	122	99	3.9	3.2	13.5	1.52	86.5	1.91	482,106	226	4.46
St. L. Sw.	1,875.72	296,955	158	177	5.1	5.6	...	...	99.7*	2.14	5,806,807	338	4.64
S. A. U. & G.	367.52	53,404	145	129	5.2	4.5	...	...	100.0	2.20	1,036,700	319	17.01
T. & N. O.	5,541.82	635,248	115	125	4.1	4.5	...	...	100.0	1.93	15,315,669	221	3.81
T. & P.	2,291.56	414,059	181	216	6.2	7.4	...	...	100.0	1.80	6,698,700	325	4.16
Tex. Mex.	205.31	16,221	79	121	2.5	3.8	2.3	1.26	97.7	2.17	650,422	170	16.14
Total	35,518.94	4,067,663	115	155	3.8	5.1</							

\* Owing to the fact that the total number of ties inserted on some roads included second-hand ties, ties other than wood, and tie blocks, the percentages of treated and



Road Diesel operations on the Erie are concentrated, at the present, on the Kent and Mahoning divisions, extending from Marion, Ohio, to Meadville, Pa.

## Erie Cuts Tops Off Hills with Diesels

Six road freight Diesels round out 30 months of service, moving 80 per cent of gross ton-mileage on two tough divisions

**A**CROSS the rolling hills of north central Ohio and the western Pennsylvania foothills to the Alleghenies, the main line of the Erie presents a saw-toothed profile which has long been a challenge to its operating department, as is evidenced by the profile map reproduced herewith. Principal bottleneck to heavy tonnage operations are the main lines of the Kent division traversing this territory eastward from Marion,

Ohio, to Kent, 114 mi., and the Mahoning division from Kent to Meadville, Pa., 89 mi. With a ruling grade of 1.1 per cent both eastbound and westbound on the Kent division, and 1.0 per cent on the Mahoning division, it is necessary to split steam-powered trains eastbound from Marion and westbound from Meadville into two trains for each one arriving. The resulting increase in the number of train units further compli-

cates operations on two stretches of single-track—one extending 28.6 mi. from SN Junction (Leavittsburg), Ohio, to Pymatuning, Pa., and the other 25.4 mi. from Shenango to Buchanan (Meadville) and comprising the ruling grade for the Mahoning division.

### Diesels "Flatten" Hills

Swelling wartime traffic (Erie's total carloadings increased 75.5 per cent in 1943 over 1938) made it apparent that some measure of relief would be required if these two bottleneck divisions were to be kept fluid. Surveys indicated that grade and curvature improvements which would permit steam trains to operate over the Kent and Mahoning divisions, without reducing the tonnage of trains received from the adjoining divisions, would require an investment of at least \$12,000,000 to \$16,000,000. The Erie found the answer in the use of 5,400-hp. Diesel-electric road freight locomotives, six of which were ordered in April, 1943, and delivered in October, 1944. During 1944 extensions to sidings to accommodate longer trains—generally 135 cars—and the installation of remote-controlled power switches were authorized at several points between Marion and Meadville, and construction of a Diesel servicing, maintenance and repair shop was begun at Marion.

The Erie had been among the first roads in the country to use Diesel pow-

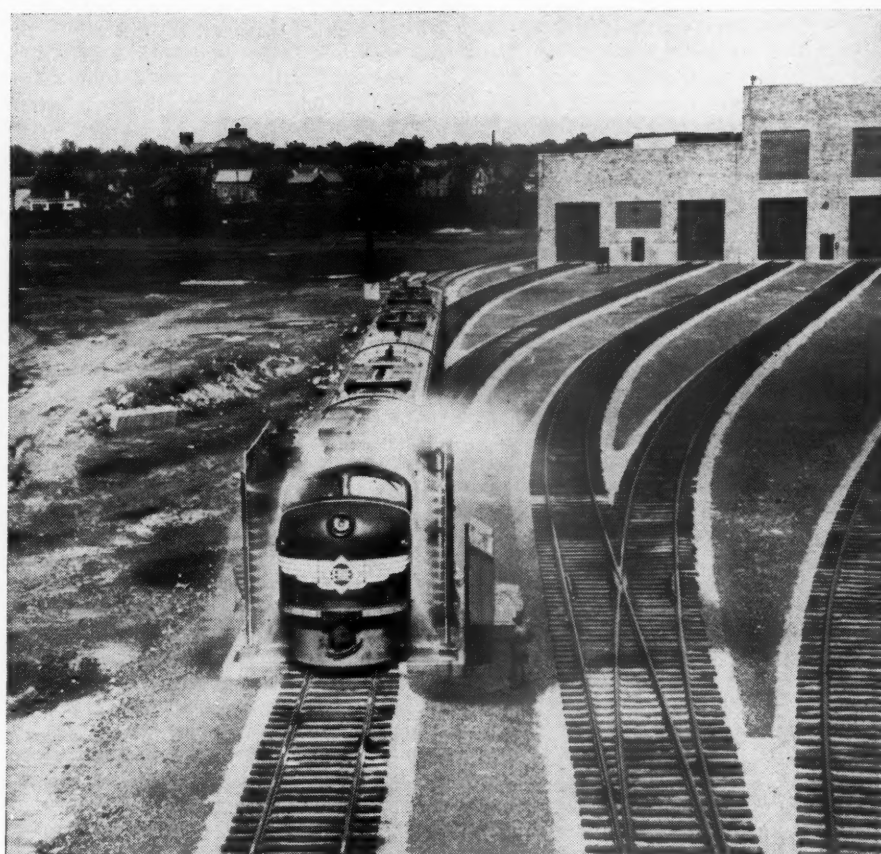


Diesel-powered tonnage freight at Leavittsburg, Ohio, on the Mahoning division

er, having ordered its first switching engine in 1926 (still in service at New York) and 37 subsequently, but had confined their use entirely to yard operations. The bulk of main line road freight had been handled by 105 steam locomotives of the Berkshire type, acquired during 1927, 1928 and 1929. These 2-8-4 engines, bearing road classifications "S", exert a tractive effort of 82,750 lb. (with booster) and weigh 461,470 lb.

When adoption of Diesel road freight locomotives was decided upon as the answer to the problem of maintaining tonnage over the Mahoning and Kent divisions, six 5,400-hp. locomotives were ordered from the Electro-Motive Division of General Motors Corporation. Each locomotive exerts a tractive effort of 225,400 lb.; weighs 925,300 lb., fully loaded; and consists of four 1,350-hp. units. Each locomotive may be split and operated as a single-cab 2,700-hp. two-unit set, but the Erie has found it expedient, except in extraordinary instances, to operate all four units as one locomotive in order to move the maximum tonnage in a single train. These six locomotives went into service in October, 1944, and have since produced daily mileage averages of 390 to 400 each, and monthly averages of 12,000 mi.—equivalent to 29 round-trips over the two divisions each month for each locomotive.

Tonnage ratings are generally 4,800 tons over the two hilly divisions for the Diesels, as compared with an average rating of 2,550 tons for the "S" class steam engines. This has made possible the operation of solid tonnage trains from Chicago to Jersey City, N. J., without breaking up at Kent or Meadville, or reassembling at the end of the divisions. Whereas the steam trains have been averaging 42 loaded and empty cars per train over these two divisions, the Diesel average has been 90. During February, 1947, gross-ton-miles per train in this territory averaged 3,957 for the Diesels and 1,972 for the steam, and gross-ton-miles-per-train-hour were 91,343 for the Diesel compared with 24,829 for the steam. Cost of



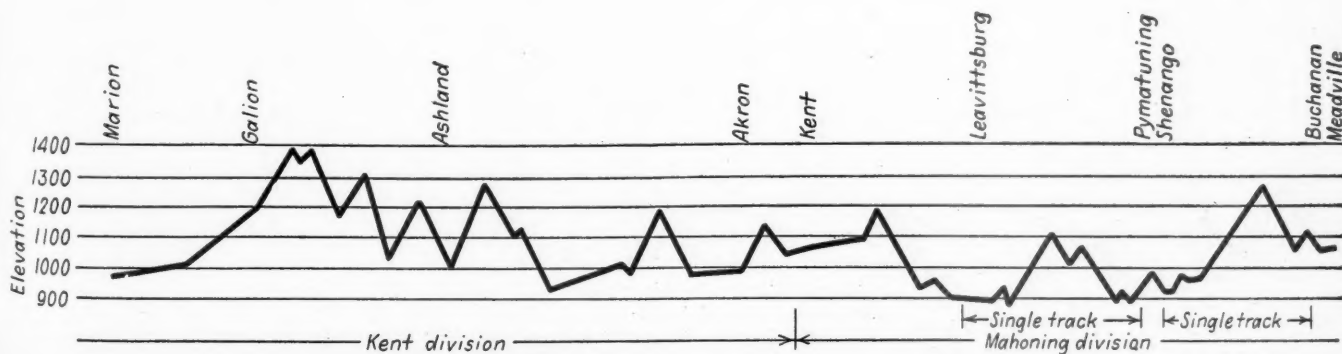
"Shower bath" at the Marion (Ohio) Diesel maintenance facilities

wages for engineers and firemen per 1,000 gross-ton-miles over the two divisions is currently averaging 15.96 cents in Diesel service and 49.94 in steam service. Eighty per cent of the gross-ton-miles moved over the Kent and Mahoning divisions is currently being handled by the six 5,400-hp. locomotives. [In the foregoing comparisons, it should be borne in mind that the Diesels are assigned only to through tonnage trains, while the steam engines (of much greater age) also handle local and branch line freights, distorting the performance figures somewhat in favor of the Diesel—Ed.]

The introduction of Diesel road power on the Erie brought with it a special

problem in training. To meet it, road foremen and shop supervisors were sent to the Electro-Motive school at La Grange, Ill., for two weeks of intensive class instruction and, on their return, themselves set up classes at main terminals for engineers and firemen. At Marion, the public school system scheduled a night course in Diesel mechanics which was well attended. The railroad furnished text books therefor.

A qualified road foreman accompanies each engineman newly assigned to a Diesel-powered train, and rides with him each successive trip until he feels that the engineer is fully qualified to handle the locomotive. Not much difficulty has been experienced in this res-



The saw-toothed profile of the Kent and Mahoning divisions, which include two single-track stretches, lends itself particularly well to Diesel operations

pect, and in only a few instances has it been necessary for the road foreman to ride more than four trips. Each engineer is furnished with a Diesel manual.

## Diesel Maintenance

Maintenance, inspection, repair and overhaul of the Diesel-electric locomotives is concentrated at facilities recently completed at Marion, Ohio, and described in *Railway Age*, June 8, 1946, page 1130. Routine maintenance work is accomplished at this point during normal turns. Turn-around and periodic inspection time of the locomotives is utilized even for painting, which is accomplished one unit, or one side of a unit, at a time so that the big tonnage haulers may be kept on the road to the maximum extent. Cost of maintenance

### Diesel-Electric Roster

Diesel-Electric Roster			
Type of Locomotive	In Service	On Order	Total
Road Frt. 5,400-hp. Electro-Motive	6	..	6
Road Frt. 6,000-hp. Electro-Motive	..	3	3
Road Frt. 6,000-hp. Alco	..	9	9
Road Pass. 4,500-hp. Electro-Motive	..	7	7
Switchers	32	25	57
Total Diesel-Electric	38	44	82

per locomotive (including labor and material), since the fleet was put into service some 30 months ago, has averaged about 18 cents a mile, which compares with a system average of 57 cents a mile for the Class "S" steam locomotives. One engine and generator and two traction trucks and motors are carried in stock for speedy replacement, the unserviceable equipment being repaired at once and made available for a subsequent replacement.

Dynamic brakes on the Diesels have simplified operation of long trains over the rough terrain, reducing break-in-twos. This electric braking has contributed to maintenance economies outside of the motive power department. For example, with the reduction in car wheel heating effected by dynamic braking, wheel changes at the terminal of one division, in which there are three descending grades of 1 per cent or greater, have been reduced approximately 75 per cent since the Diesels went into service.

Based on the success of the six road engines now in service, the Erie has ordered three 6,000-hp. Electro-Motive Diesels to augment the fleet of six 5,400-hp. locomotives now in service between Kent and Meadville, and has on order nine 6,000-hp. Alco Diesels to go into service on the main line east of Hornell, N. Y. In addition, seven 4,500-hp. Electro-Motive road passenger engines

are going in service to Dieselize all through passenger trains between New York and Chicago, except that Nos. 7 and 8 will run by steam between

Marion and Chicago to permit a quick turn-around of one locomotive at the former point. Twenty-five additional Diesel switchers are also on order.

## European Conditions

(Continued from page 58)

and while it does not have a majority in the House of Lords—which has to concur in any legislation brought forward—the latter always follows the majority in the Commons. One reason for this is that it is always within the power of the House of Commons either to abolish the House of Lords or to pack it with enough new lords sympathetic with "labor" to insure a majority.

The political situation in France is likewise bad. Thirty per cent of the

French are communists, and, in my opinion, France could go communistic almost any time it desires to. Prime Minister Ramadier recently dismissed from the government a number of communistic members and, as a result, there were widespread strikes in France for three or four weeks. The communists control all the labor unions, and for that reason are very dominant, even though they are not in the cabinet. In Switzerland, the government is sound and secure. It could be considered liberal, but neither socialistic nor communistic, and I doubt very much that there will be any serious change in the present government.

## NEW BOOKS . . .

*This Fascinating Railroad Business*, by Robert S. Henry. Third edition, revised. 521 pages, illustrated, 8¾ in. by 6 in. Bound in cloth. Published by the Bobbs-Merrill Company, Indianapolis, Ind. Price, \$3.75.

In this detailed and comprehensive volume, Colonel Henry has placed the railroad industry beneath a strong magnifying glass, bringing into sharp focus all railroad operations, ranging from the minute to the enormous, from the less important to the all-important. As a revision of the book first published in 1942, the author brings his work up to date with an analysis of railroad operations during World War II, and discusses the future of the industry in the light of wartime and postwar developments. It contains all of the ingredients of its predecessors—encyclopaedic data on railroads and railroading narrated with interest and entertainment—plus what has happened in "this fascinating business" since 1942.

Colonel Henry's book has become standard equipment for every library which assigns any niche whatever to transportation. Within its pages is the answer to practically any question which may be asked about the tools and practices of the railroad industry. Aside from being a record in narrative style, which will be read avidly for pure entertainment, the book constitutes a time-saving reference work for everyone with any curiosity about the railroad business.

The top problem of the railroads, the author maintains in this revised edition, is the continuance of improvements. By way of illustration, he writes of the new passenger train seats as "products of patient research, including anthropological measurements of thousands of passengers and care-

ful questioning of others." He also relates a proposal to install a "television pick-up on the front of the locomotive which will reproduce what its 'sees' ahead on television screens in the coaches." He asserts that these improvements "taken all together, and looking at the railroad as a whole as the great machine of many parts and varied processes which it is, hold great promise for future transportation by rail."

*Railroad Wages and Labor Relations 1900-1946*. By Harry E. Jones. 6 in. by 9 in. 352 Pages. Paper-bound. Published by the Bureau of Information of the Eastern Railways, Grand Central Terminal, New York. Free for Limited Distribution.

The executive secretary of the office of the Eastern railroads which is responsible for the accumulation and analysis of all information pertinent to labor relations has produced a handbook of authentic information bearing on this field of railroad concern which will be an invaluable time-saver to all who must travail in this difficult and thorny vineyard. The book gives in its introduction the designation of each class of employees, lists the unions which represent them, and summarizes the improvement in wages of each class since 1922.

The remainder of the book is divided into two parts. Part I, of 110 pages, is an historical survey of union-management relations on the railroads up to 1946. Part II, 184 pages, is entitled "the results" and gives detailed statistics of hourly, weekly, monthly, and yearly wages of all classifications of employees—for each year back to 1922 for some classes, and back to 1915 for others; followed by a similar statistical summary of "the results" of union activity on the financial performance of the railroads.

# Railroad Earnings Analyzed in Latest "Monthly Comment"

ALTHOUGH Eastern district railroads "as a whole" covered their fixed and contingent charges by only a "narrow margin" during the first five months of 1947, the situation in other territories was "much more favorable," it is observed by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission in the latest issue of its "Monthly Comment."

According to the bureau, the ratio of income available for fixed and contingent charges to such charges was only 1.19 in the Eastern district, as compared with 8.82 in the Pocahontas region, 2.21 in the Southern region and 2.11 in the Western district. With respect to the larger Eastern roads, it further noted that in that period the Pennsylvania failed to earn its charges by \$10,438,824, and the New York, New Haven & Hartford by \$1,440,023. At the same time, it stated that the New York Central's net income of \$556,400 "barely covered" its charges, while the Baltimore & Ohio, with a net income of \$4,001,724, and the Erie, with a net income of \$1,512,292, "made a somewhat better showing, although the coverage ratio was small in each case."

The Eastern district had the highest operating ratio (82) for the five months, according to the bureau, followed by the Southern region (77.6), the Western district (76) and the Pocahontas region, with 66.7.

## Measure of Earnings

The bureau also comments on the "considerable improvement" in net income shown in each of the territories for the first six months of 1947, for which period that figure totaled approximately \$204 million, as compared with a net deficit of \$21 million and a net income of \$173 million in the corresponding 1946 and 1941 periods. It pointed out that while the Eastern district and Pocahontas region roads combined accounted for only 35.3 per cent of the 1947 net income, as compared with 67.9 per cent in the corresponding 1941 six months, the western roads increased their proportion of the net from 12.5 per cent in the 1941 period to 49 per cent in 1947. The southern roads' contribution declined from 19.6 per cent to 15.7 per cent.

"As stated in previous issues of the 'Comment,' this percentage is a useful measure of railway earnings, because it is based primarily on operating results of the periods covered without regard to

federal income taxes," the bureau said. "The amounts of such taxes depend not only on earnings from operations but are affected by changes in the tax laws, adjustments of prior years' taxes, and by such important items in the carriers' accounts as other income, miscellaneous deductions from income and fixed and contingent charges."

The bureau's report also discloses that the operating net for Class I roads as a whole was 12.3 per cent of the total operating revenues in the first half of 1947, as compared with 4.7 per cent in the same period of 1946 and 20.7 per cent in 1941. "Although the 1947 percentages for each district or region show marked improvement over those for 1946, they are considerably below the 1941 level, particularly in the East and South," the bureau stated. "Operating revenues for the roads as a whole were 71 per cent higher in 1947 than in 1941, but operating costs . . . increased about 89 per cent."

With respect to June results, the "Comment" shows that (1) operating revenues totaled \$696,908,689, or 13.9 per cent above June, 1946, and 2.1 per cent above May, 1947, while for the 12-months period ended with June, 1947, the revenues were 5.4 per cent more than for the corresponding 1946 period; (2) for the 12-months period ended with June, the revenue increased \$421 million, and declined \$1,298 million, when compared with the corresponding 1946 and 1945 periods, respectively; (3) freight revenue was 0.5 per cent more on a daily basis than in May and 21.4 per cent more than in June, 1946; (4) passenger revenue was 13.3 per cent more on a daily basis than in May and 20.5 per cent less than in June, 1946; and (5) other revenue (mail, express, etc.) was 3 per cent more on a daily basis than in May and 17.9 per cent more than in June, 1946.

June operating expenses, the report continued, amounted to \$550,057,089, an increase of 6.3 per cent over June, 1946, and were 78.9 per cent of the June, 1947, revenues. The latter figure compares to a June, 1946, operating ratio of 84.5 per cent. The expenditures for maintenance of way and structures, other than for depreciation, retirements, deferred maintenance, amortization and equalization, were 15.2 per cent greater than in June, 1946, while the net railway operating income (\$60,201,057) was \$15.5 million less than in May and \$22.4 million more than in June, 1946. For the 12 months ended with June, the total net

railway operating income was \$832,945,000, or 82.9 per cent more than in the 12 months ended with June, 1946.

Another tabulation in the "Comment" indicates that the long-term debt of the Class I roads amounted to \$9,093 million at the close of 1946, as compared with \$10,463 million on December 31, 1943, a reduction of 13.1 per cent, while unmatured funded debt outstanding declined by over \$1,112 million or 13.3 per cent. "Primarily as the result of reorganizations completed during the 1944-46 period, debt in default declined from \$758 million at the close of 1943 to \$515 million on December 31, 1946, or 32 per cent," the bureau said. "Equipment obligations, however, increased from \$774 million in 1943 to \$845 million in 1946, or 9.2 per cent. The amount of capital stock outstanding increased by 1.5 per cent."

## Freight Traffic

With respect to freight traffic, the bureau notes that carloadings reported by the Association of American Railroads for the four weeks ended with July 26, as compared with the four weeks ended with June 28, show increases in two and decreases in six commodity groups. Merchandise less-carload and miscellaneous carload combined decreased 6.4 per cent; coal, coke and ore combined decreased 18.3 per cent; forest products decreased 5.5 per cent; grain, grain products and livestock increased 28.6 per cent and total carloadings decreased 7.6 per cent, the report stated, adding that the average weekly carloadings of all commodities based on the four weeks of July were 818,957 cars, a decrease of 3.8 per cent under the corresponding 1946 period.

The bureau also observed that (1) revenue tons of freight in May increased over May, 1946, at a higher rate (53.5 per cent) than the corresponding increase in ton-miles (42.2 per cent); (2) there was a decrease in the average haul per road from 238 miles in May, 1946, to 220.5 miles in May, 1947; (3) the number of passengers in May decreased 0.7 per cent under the number in May, 1946, as compared with a decrease of 21.1 per cent in passenger-miles; and (4) the average journey per road declined from 80.3 miles in May, 1946, to 63.8 miles in May, 1947.

The "Comment" also reproduces estimates compiled by the Department of Agriculture's Production and Marketing Administration which has predicted that

(1) weekly loading requirements for grain and grain products are expected to average 68,000 cars in August, 62,400 cars in September and 56,800 cars in October, representing respective increases of 33.3, 31 and 13.8 per cent over the corresponding 1946 months; (2) loading requirements for livestock will average 14,750 cars weekly in August, as compared with 11,522 in July, 15,939 in August, 1946, and expected loadings of 18,400 cars weekly in September and 26,000 in October; (3) due to a lateness of the peach crop in the southeast, 79,500 cars of fresh fruits and vegetables will be moved in August, an increase of 8.4 per cent above the August, 1946, loadings; and (4) there will be sizable decreases from last year in shipments of potatoes from the Middle Atlantic states and the Rocky Mountain area and an increase of about 25 per cent in the movement of oranges from California and Arizona.

With respect to the Railway Express Agency, the bureau reports that the total "charges for transportation" made by

the agency for the first five months of 1947 amounted to \$180,529,341, an increase of 4.5 per cent over the comparable 1946 period, while additional revenue from operations other than transportation totaled \$2,379,037, an increase of 3.8 per cent. Total operating expenses for the first five months of 1947 were \$116,940,896, a decrease of 7.2 per cent.

The operating expenses referred to do not include "express privileges" paid the railroads for transportation, which amounted to \$55,876,327 for the first five months of 1947, as compared with \$40,470,656 in 1946 or an increase of 38.1 per cent. For the 1947 period, the express revenues of Class I railways were \$50.9 million, as compared with \$37.8 million in 1946, an increase of 34.7 per cent.

At the same time, the bureau added, railway express taxes, which consist principally of payroll taxes for employee retirement and unemployment insurance, increased in the first five months from \$8,185,171 in 1946 to \$9,767,332.

## Train Radio Pack-Set

A portable two-way FM, VHF radio pack-set has been designed by the Radio Division of the Bendix Aviation Corporation, Baltimore, Md., to extend end-to-end railroad voice communications to the track-side. The set which bears the designation MRT-2B has a self-contained rechargeable power supply and is a compact unit which is to be carried by a shoulder strap so that the metal case hangs on either hip. The 36-in. antenna which retracts into the case is designed so that the equipment is turned "on" when the antenna is completely extended. When not in use,

the antenna retracts into the case and the radio set is automatically turned "off." The antenna when fully extended is a half-wave type at the railroad radio frequencies, namely 158.25 mc. to 161.97 mc.

The all over size of the case is 11 $\frac{1}{8}$  in. high by 9 $\frac{1}{8}$  in. wide by 4 $\frac{1}{8}$  in. deep. The weight including power supply and handset is 15 lb. 2 oz. Both the transmitter and receiver are crystal controlled and are especially designed for use with the Bendix two-way train radio units. Both sets are built on a single small chassis using 9 miniature type tubes.

The receiver utilizes a super-heterodyne circuit to obtain maximum sensitivity and gain. The transmitter is activated by a push-to-talk button on

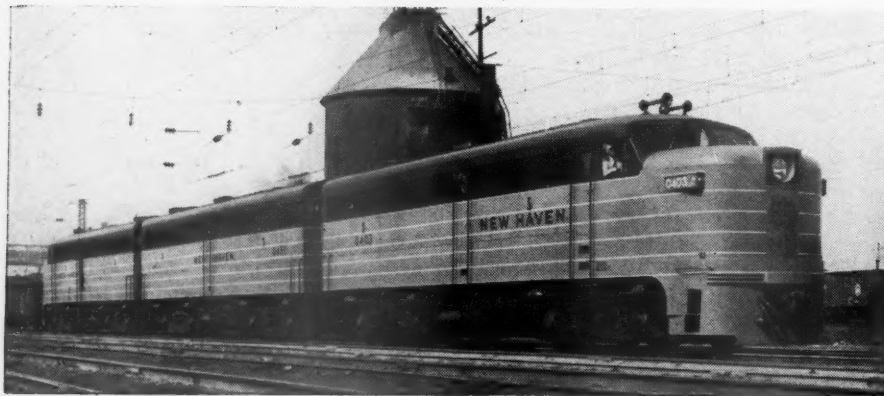


The pack-set in use

the earphone, and the circuit is so designed that filaments of the receiver are not in use when the transmitter is in operation and vice versa. This saves on current consumption and provides for economical use of the portable power supply.

The power supply may be easily and quickly removed for recharging. It consists of a completely enclosed band of miniature non-spillable storage batteries which activate a tiny dynamotor, designed for a 6-volt input and a 100-volt output. The filaments operate from a 1 $\frac{1}{2}$ -volt source. The battery is enclosed in a metal box which is ventilated with an external escape vent so that no fumes accumulate within the enclosed case.

Each pack-set may be equipped with two power supply units so that when the pack-set is returned to the caboose, one battery may be removed from the carrying case and recharged, while the second set of batteries provides for continued operation. This arrangement assures from 2 to 3 hours constant usage with several hours intermittent usage. Recharging may be done from either a. c. or d. c. sources. Approximately one mile solid communication is normally obtained in pack-set to mobile or fixed station operation. The unit may be used in any weather.



A recently-delivered New Haven 4500-hp. Diesel-electric freight engine built by American Locomotive-General Electric

# GENERAL NEWS

## Strike Was "Open Violation" of Law

So says "emergency board" of engineers' walkout on Southern Pacific

In addition to submitting four specific recommendations, an emergency board appointed by President Truman to investigate and report on the disputes between the Southern Pacific (Pacific Lines), Northwestern Pacific, the San Diego & Arizona Eastern and the Brotherhood of Locomotive Engineers has found that the 6½-hour strike on July 21 took place in "open violation" of the Railway Labor Act and "could have been avoided had the machinery established in the act been utilized in good faith by both parties." A review of the dispute appeared in *Railway Age* of August 2, page 50.

According to a White House statement, "the board found certain apparent defects in the rules of procedure established by the National Railroad Adjustment Board under which claims are allowed to accumulate over a period of years without a final disposition, and decisions are rendered without reasoned opinion on each award so that they may establish precedent and thus lessen the number of cases actually requiring board action before final settlement."

The White House said that the board, in submitting its report to the President, noted with apprehension the fact that the agreement entered into between the parties which ended the short strike "indefinitely postponed" rather than cancels completely the call of strike action taken in January.

The four recommendations urged by the board, which was composed of Colonel Grady Lewis, Washington, D. C., attorney; Leverett Edwards, Oklahoma City, attorney; and Dean P. A. Dodd of the University of California, are as follows:

1. That the working agreements between the parties be amended to limit the length of time an alleged violation of the agreements may be handled on the property before final adjustment.
2. That the First Division of the National Railroad Adjustment Board amend its rules of procedure to require a fully reasoned opinion on each award made, to the end that the awards, when so made, may be used as a precedent by the parties at interest in their administrative application of such awards on the property affected.
3. That until the recommendations contained in No. 1 and No. 2 above are effected, all claims remaining on the strike ballot and not disposed of by direct negotiations be submitted to the First Division of the National Railroad Adjustment Board for a final disposition of those claims.
4. By reason of the possible adverse effect that the present agreement of indefinite postponement may have upon the negotiations, and by reason of the further fact that by adoption of recommendation No. 3 a complete settlement of the dispute is provided, the board recommends an unqualified cancellation of the call for strike action.

## Railroad Ads Irk Ops

Leaders of the operating brotherhoods, according to the unions' weekly, "Labor," are very much annoyed by the railroads' newspaper advertisements explaining to the public that must pay the bill the significance to that public of the ops' current "demands" for 44 changes in working rules.

A formal statement was issued at Cleveland over the signatures of Alvanley Johnston, David B. Robertson and A. F. Whitney, heads, respectively, of the engineers', firemen's and trainmen's brotherhoods, in which the railroads' advertisements are described as containing "false conclusions without facts." When it comes to "featherbedding" the "railroad bankers are past masters," according to this statement, which asserts that the railroads insist on earning a fair return on \$27 billion when the "present market value" of stocks and bonds of 98 per cent of the Class I roads is, it says, about \$11 billion.

According to the same authority, Mr. Robertson, in an address at the convention in San Francisco, Cal., of the firemen's delegates, lashed out at the railroads' advertisements, terming them "typical of the antique thinking which totters out of Wall Street banking offices and tries to direct a modern transportation system." The convention "adopted a resolution" to the effect that the railroads' advertisements "distort and misrepresent the facts" and authorized the publication of advertisements, jointly with other unions, "answering the carrier falsehoods."

## Short Lines Annual Meeting

William T. Faricy, president of the Association of American Railroads, will address the October 22 luncheon session of the American Short Line Railroad Association's thirty-fourth annual meeting, to be held October 21-22 at the Hotel New Yorker, New York. Other speakers on the program, announced by the association's president, J. M. Hood, include Interstate Commerce Commissioner Richard F. Mitchell; Chairman Frank P. Douglass of the National Mediation Board; Frank C. Squire, member of the Railroad Retirement Board; D. P. Loomis, executive director, Association of Western Railways; John J. Fitzpatrick, chairman, Traffic Executive Association—Eastern Territory; and A. Ernest Shannon, vice-president, George H. Forster & Co., Ltd.

## Recommends Express Rate Rise to I. C. C.

Director of its Bureau of Traffic finds railroads need revenues

Making a proposed report on further hearing in the Ex Parte No. 163 proceeding, C. G. Jensen, director of the Interstate Commerce Commission's Bureau of Traffic, has recommended that the commission should find that the increases in Railway Express Agency rates and charges proposed by that agency will be just and reasonable for a period of one year or until further order of the commission. Mr. Jensen found that the railroads are in "urgent need" of additional revenues to cover the cost of transporting express traffic.

At the same time, he recommended that the commission should require the express agency to continue its traffic tests and cost studies and present to the I.C.C. within six months the results of those further studies and its proposal of a reasonable uniform single scale of rates for national application to replace the existing dual scales. He also recommended that the commission should further authorize relief from the long-and-short-haul provisions of Section 4 of the Interstate Commerce Act to the extent necessary to permit the establishment of the rates proposed. The increase would apply to l.c.l. class rates, not to express carload or commodity rates.

**Temporary Rise in 1946**—As noted in *Railway Age* of March 15, page 563, the R.E.A., asserting that income from current rates will fall short "to the extent of not less than \$70,000,000" of providing adequate compensation in 1947 for services performed by the railroads in transporting express traffic, applied to the commission for authority to make additional increases in its charges. The application, on which extensive hearings were held this summer, took the form of a petition in the Ex Parte No. 163 proceeding, wherein temporary increases calculated to produce \$58,900,000 in additional annual revenue were approved by the commission for a one-year period starting December 13, 1946.

According to the proposed report, the express privilege payments to the railroads for transporting all less-than-carload traffic in 1946 amounted to approximately \$80,240,000, while the proposed rates applied to 180,000,000 such shipments (an estimate of possible 1947 traffic) would produce \$165,584,000, an increase of approximately 106.3 per cent.

The report observed that the cost to the railroads of transporting the 180,000,000 shipments, including operating expenses, rents and taxes, excluding federal income

taxes, would amount to \$181,301,038, or approximately \$9,807,457 more than the anticipated express privilege payments to the railroads. It added that if allowance for return at 6 per cent and federal income tax estimates are included, the deficit in express privilege payments to the Class I roads would be \$54,366,811.

"Included in the estimated express privilege payments and the costs of transporting the traffic are both class and commodity traffic," the report continued. "The only segregation of these kinds of traffic are in the traffic test [conducted by the R.E.A. for the period covering January 16 to February 28] which shows, for the 44-day period, that approximately 86.38 per cent consisted of class traffic and 13.62 per cent of commodity traffic, and that the revenues received divide approximately 86.92 per cent and 13.08 per cent, respectively. There are no corresponding figures for 1946 or previous years."

**Will Not Compensate RRs** — "The commission," Mr. Jensen continued, "should take judicial notice that petitioner has recently filed tariffs canceling numerous commodity rates and increasing others. The resulting increases are substantial, but their revenue effect cannot be measured by anything of record; however, it is clear that the increased revenues from the class rates proposed here, plus the increases in the commodity rates under the tariffs filed, will not produce sufficient revenue over and above the operating expenses and taxes of the express agency to cover the allocated cost of the railroads for transporting the traffic."

Mr. Jensen said that although the need for additional revenue is greater in Eastern-Southern territories than in Western territory, the present Western scale is on a higher level than the Eastern-Southern scale, and this relationship is to be maintained. He contended that the difference in the levels of the two scales result in "lack of uniformity and too great differences" at the border of these territories.

"Petitioner operates on a national scale: most of the wages to its employees, prices for materials and supplies and federal taxes are on a national basis; and application of the Western scale between points in Eastern-Southern territory and points in Western territory are on a national basis," he went on. "The only justification for not applying the Eastern-Southern scale throughout the country is that it would not produce sufficient revenues in the Western territory. It does not appear, however, that a uniform single scale could not be established that would adequately represent the nationwide operations of the petitioner."

**Objections**—The report also reviewed the objections voiced by shippers, who asserted, among other things, that (1) the proposed increases are not uniform and are unfair and propose a greater burden on light-weight and short-haul traffic than on heavier long-haul traffic; (2) much traffic formerly handled by express has already been diverted to other forms of transport and that the proposed rates will result in even greater diversions and in greater losses in revenue than will be gained by the increased rates; and (3) the express serv-

ice does not measure up to the present rates and the proposed rates are unreasonable for the service given.

The report also pointed out that while the volume of express traffic and operating revenues increased each year from 1939 through 1945, increased revenues were largely offset by increased costs of operation and taxes, and that except for 1942-43, there has been but "little change" in the ratio of express privilege payments to revenues.

Among other things, Mr. Jensen also criticized a statistical cost study for 1946, introduced on behalf of the Class I roads, which he said reflected incorrect conclusions. The record included no evidence of the reasonableness or propriety of the proposed rates except for the purpose of increasing revenues, he observed. With the increases in effect the express privilege payments to the railroads would exceed their out-of-pocket expenses of providing express service, he found—that is, on the basis of 180,000,000 shipments annually—but still would fall short to the extent of over \$54 million of meeting these costs plus federal taxes plus a 6 per cent return.

### **Bowman Appointed to F. R. P. Executive Council**

Robert J. Bowman, president of the Chesapeake & Ohio, has been appointed a member of the executive council of the Federation for Railway Progress to represent railroad members. His is an interim appointment, the announcement said, and he will serve on the council until succeeded by a representative to be elected by railroad members of the federation next spring. Robert M. Drysdale, Jr., has been appointed treasurer of the federation to succeed J. J. Anzalone, resigned. John H. Payne, Jr., recently resigned as executive vice-president.

### **Southwestern Grain Loadings Increased by 40 Per Cent**

The eight principal southwestern grain railroads handled more than 40 per cent more bulk grain loadings during June and July of this year than they did during the same two months of 1946, the Association of American Railroads announced last week. During these two months, grain loadings on those roads totaled 195,073 cars, as compared with 137,889 in the corresponding period last year, the A. A. R. said, even though the current crop in the six southwestern winter wheat states is only 25 per cent greater than last year.

### **A. W. S. Meeting Program Lists Railroad Welding Papers**

The tentative program for the American Welding Society's annual meeting at the Hotel Sherman, Chicago, during the week of October 19, schedules a railroad session for Monday, October 20, and includes subjects of general interest to the railroads' mechanical and engineering departments.

The subjects to be covered at the railroad session are: Flame-Hardening Locomotive Brake and Spring-Rigging Pins and Bushings, by B. W. Covell, master

welder, Northern Pacific; End Hardening of Rails and Open-Hearth Frogs, by R. W. Torbert, Oxweld Railroad Service Company; New Developments in Railroad Maintenance-of-Way Work, by C. A. Dailey, Air Reduction Sales Company, and Problems in Resistance-Welding Stainless-Steel Railway Car Structures, by J. Van den Beemt, welding engineer, the Budd Company.

In addition to the papers dealing specifically with railroad welding the following papers of general interest will be among those presented during the five days of technical sessions: Directional Welding to Minimize or Eliminate Distortion in Weldments and Control Residual Stresses, and Welded Fabrication (on October 20); Welding Locomotive-Type High-Pressure Boilers, Development of Butt-Welded Joints in Pressure Vessels, Semi-Automatic Welding with Standard Manual Arc-Welding Equipment, and the Use of Small-Scale Tests for Predicting the Performance of Large Welded Structures (on October 21); Flash Welding of Structural Aluminum Alloys, Powder Cutting as a Production Tool, Fundamentals of Spot Welding of Steel Plate, and the Development and Application of Quality-Control Techniques to Resistance-Welding Production (on October 22); Factors Affecting Weldability of Carbon and Alloy Steels, Shape-Welding by the Submerged Welding Process, and Stud Welding (on October 23).

The A. W. S. annual meeting is held in conjunction with the National Metal Exposition at the International Amphitheatre, Chicago. The exposition, scheduled for a full week starting October 18, will include welding and cutting exhibits and demonstrations.

### **National Railway Labor Panel Abolished by Truman Order**

Revocation of an executive order of May 22, 1942, which established for the duration of World War II and six months thereafter a National Railway Labor Panel for the creation of "emergency boards" for the adjustment of railway labor disputes, was ordered this week by President Truman. In issuing the order, the President said that "it appears that the procedures available under the Railway Labor Act are now adequate for the handling and adjustment of such disputes." As of June 23, approximately 50 "emergency boards" had been appointed from the panel.

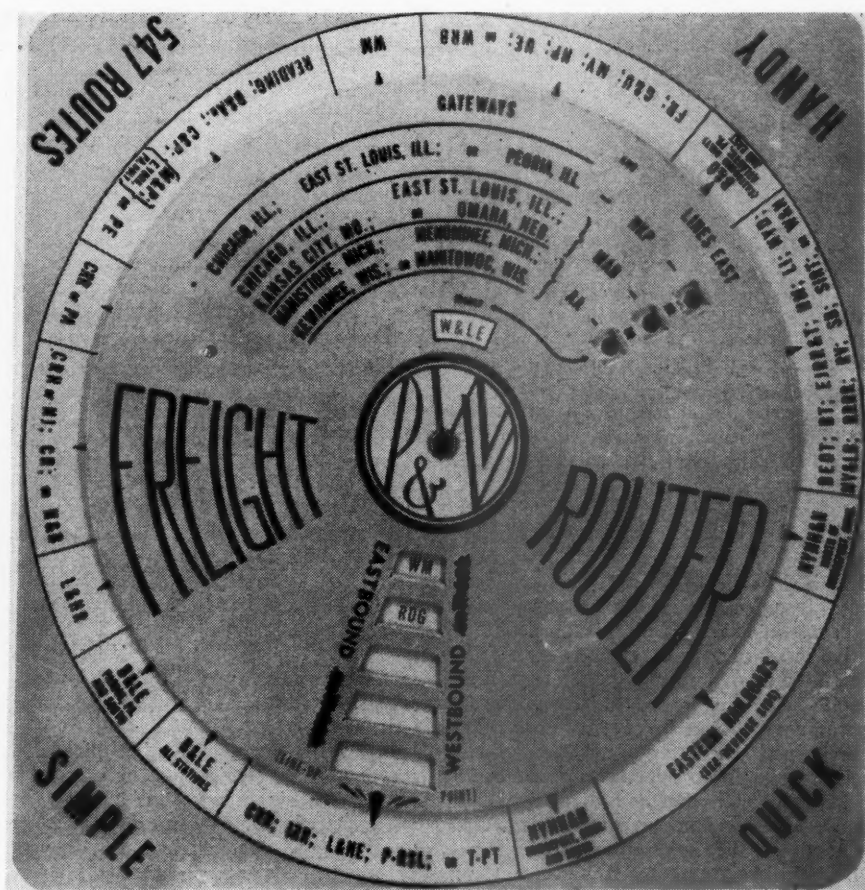
The panel was established by the late President Roosevelt, acting upon the suggestions of railway union leaders, to set up a means whereby labor-management disputes in the railroad industry could be submitted to "fact-finding" boards without the necessity for a strike vote contemplated by regular Railway Labor Act procedure.

The 1942 order contemplated that when a wartime dispute reached the stage where under normal procedures a strike vote would be taken, the union could, prior to notice by the National Mediation Board to the President of a threatened interruption to commerce, notify the chairman of the panel of the failure of the parties to

While only the unions could invoke the services of the panel and a dispute could still reach the usual type of emergency board if there were a threatened strike as a result of dissatisfaction with the recommendations of a board created by the panel, the 1942 order stated that the procedure was set up "in view of the fact that American labor in general has agreed that during the war there shall be no strikes."

The difference between the steel delivered to freight car manufacturers from March to June and the steel which could be accounted for by the construction of freight cars in the same period amounted to 160,000 tons, according to a statement by Senator Clyde Reed, Republican of Kansas, August 8. Senator Reed was reported to have expressed, in a telegram to S. M. Felton, president of the American Railway Car Institute, his dissatisfaction with the manner in which car builders "have fallen down in the matter of throwing steel in their hands into freight car production." The senator reportedly said also that unless about 7,000 freight cars are built this month and 10,000 in September he will call a meeting in Washington in October of the Senate interstate commerce subcommittee which he heads and subpoena the records of car builders.

"Just as thousands of men have been made idle recently in the automobile industry for lack of steel, and because one supply plant is shut down by a strike, lack of steel sheets and plates and items manufactured from them can and has persistently hampered freight car production," Mr. Felton continued. "There is no doubt that the steel industry has cooperated in increasing its shipments since Senator Reed's first hearing on freight car production in February. However, not all of the increased steel shipments have been received by the car builders, and sheets and plates continue in short supply. While the figures cited by Senator Reed may reflect accurately the overall amount of



\* \* \*

Meanwhile, the Clerks' union has been chosen to represent clerical, office, station and storehouse employees of the Chicago Railways' Hotel Ticket Offices, while yardmasters of the South Omaha have chosen the Brotherhood of Railroad Trainmen. Both of these groups were formerly without representation as were Richmond, Fred-

A spokesman for the O. D. T. said that between June 1 and August 10, the C. N.

has received 38,322 U. S.-owned cars carrying coal and returned 37,232, while the C. P., between June 17 and August 11, returned 885 more coal-carrying cars than it had received.

## Young Takes His Faster Freight Train Plan to the Public

A relief for the box shortage which calls upon railroad management to eliminate conformity in freight train schedules has been advocated by the Federation of Railway Progress, according to a statement by Robert R. Young, chairman of the federation.

"The persisting shortage of box cars is the limiting factor in transporting to the consuming markets of the world our agricultural products now piled on the ground in this country," the statement said. "A study initiated by the advisory committee of the federation reveals that what are advertised as 'fast' freight trains on eight routes from West coast cities are scheduled to depart at exactly the same time, and to arrive in Chicago at exactly the same minute on the seventh morning after departure, despite wide divergence in distances and operating conditions. Since these trains are scheduled at speeds far below those of fast freight trains in other sections of the country, it is obvious that considerations other than the public interest control. It would be easy to reduce schedules on some, if not all, of these eight routes to sixth morning deliveries. The advisory committee has recommended that the federation make these facts public."

The federation's recommendation is also the theme of full-page advertisements which made their appearance in many newspapers this week under the sponsorship of the Chesapeake & Ohio. "There is good reason to believe that by lifting deliberate freight slowdowns on the roads that still practice them, we could provide more cars this summer and fall than our shops can possibly build," the advertisements say.

"The next few weeks will be critical ones on our food problem," the advertisements continue. "Our wheat crop is estimated to exceed any previous record by 300 million bushels. It is even now being piled in the fields for want of cars. If you feel as strongly about this as the C. & O. does, write to your newspaper and your congressman. . . . Demand that our trains be scheduled not merely to suit the private deals of the railroads, but that so we can make the best use, for the whole public, of our shamefully depleted stock of freight cars."

## R.E.A. Seeks Authority to Serve Non-Certificated Air Lines

The Railway Express Agency has applied to the Civil Aeronautics Board for authority to engage directly in air transportation by "mutually satisfactory agreements" with non-certificated air cargo carriers to perform express service in conjunction with them. The application said that a "large number" of non-certificated cargo carriers recently have requested the R. E. A. to enter into arrangements with them to conduct an indirect air transportation cargo business over their lines.

"Non-certificated cargo carriers have represented to the applicant that they can best carry on and develop their cargo operations during a period of experimentation if they devote their attention principally to acquiring, maintaining and operating aircraft and arrange with the applicant to perform the pick-up and delivery, clerical and other services necessary to give a complete door-to-door service to shippers and consignees, the applicant also to provide through its rail and motor connections a through and complete service to off-airline points not reached by the cargo carriers' airlines," the application said.

## July Employment

Railroad employment increased 0.50 per cent—from 1,375,825 to 1,382,685—during the one-month period from mid-June to mid-July, and the mid-July total was 2.45 per cent above that of July, 1946, according to the preliminary summary prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The index number, based on the 1935-39 average, was 132.7 for July, as compared with 133 for June and 129.5 for July, 1946.

July employment was above that of the corresponding 1946 month in six groups, the increases ranging from 0.10 per cent in the professional, clerical and general group to 9.68 per cent in the maintenance of way and structures category. The only decrease was 2.97 per cent in transportation, other than train, engine and yard.

As compared with the previous month, there were decreases in employment in four groups, ranging from 0.10 per cent in transportation, other than train, engine and yard, to 1.06 per cent in transportation, train and engine service. The increases ranged from 0.16 per cent in the professional, clerical and general group to 3.89 per cent in the maintenance of way and structures category.

## 1st Quarter Loading Estimates Were 6.5 Per Cent Low

The 13 regional Shippers' Advisory Boards underestimated carloadings for the first quarter of 1947 by 6.5 per cent, according to the latest comparison of the forecasts with actual loadings, issued by W. C. Kendall, chairman of the Car Service Division of the Association of American Railroads. The variations by individual boards ranged from an overestimate of 2.9 per cent to an underestimate of 18.3 per cent, while the variations by commodities ranged from an overestimate of 42 per cent in the case of frozen foods, fruits and vegetables to an underestimate of 134.7 per cent in metals other than iron and steel.

The report showed that there were overestimates in 16 commodity groups and underestimates in the same number of categories. In addition to frozen foods, fruits and vegetables, there were overestimates of 32.6 per cent in agricultural implements and vehicles, other than automobiles; 21.9 per cent in cement; and 19.9 per cent in frozen food products in cans and vegetables. Among the larger underestimates were 78.1 per cent in paper, paper board and prepared roofing; 42 per cent in chemicals and

explosives; and 33.2 per cent in cotton seed, soybean-vegetable cake and meal, except oil.

The report showed that forecasts were over loadings in two board districts and under in 11.

## Comparison National Forecast with Actual Carloadings—First Quarter 1947

Board	Car-loadings Estimated	1st Quarter 1947 Actual	Percent- age of Over Est.		Accuracy Est. Est.
			Est.	Est.	
Allegheny . . . .	1,132,477	1,139,465			0.6
Atlantic States	678,745	787,738			16.1
Central West..	317,883	310,764	2.2		
Great Lakes ..	370,440	433,505			17.0
Mid-West ..	900,769	943,554			4.8
New England ..	145,010	171,504			18.3
Northwest ..	285,357	287,284			0.7
Ohio Valley ..	1,024,604	1,068,476			4.3
Pacific Coast..	338,715	328,985	2.9		
Pac. Northwest	230,188	243,860			5.9
Southeast ..	876,077	960,444			9.6
Southwest ..	450,210	506,954			12.6
Trans-Mo-Kan.	378,075	409,741			8.4
Total .....	7,128,550	7,592,274			6.5

## Numerous Rail Units Signed in Army Affiliation Program

The Association of American Railroads and individual roads have thus far signed agreements to affiliate 25 units under the War Department's Affiliation Program, Major General Edmond H. Leavey, chief of transportation, announced recently. As noted in the *Railway Age* of July 12, page 86, the railroads became the first transportation agency to "enlist" in this new Organized Reserve Corps when A.A.R. President William T. Faricy signed the affiliation agreement committing the association to the sponsorship of three headquarters units.

Those units will consist of headquarters and headquarters companies of the First, Second and Fourth Military Railway Service, located, respectively, at Chicago, New York, and Washington, D. C. The Southern will sponsor the 707th Headquarters Railway Grand Division, located at Atlanta, Ga., and the 727th Railway Operating Battalion, located at Birmingham, Ala. The Chicago, Milwaukee, St. Paul & Pacific will sponsor the 731st Railway Operating Battalion at Minneapolis, Minn., and the 757th Railway Shop Battalion (Steam) at Milwaukee, Wis. Two operating battalions, the 715th and 743rd, will be sponsored by the Illinois Central at Memphis, Tenn., and Chicago, respectively, while two others, the 725th and 737th, will be sponsored by the Chicago, Rock Island & Pacific at Little Rock, Ark., and Des Moines, Iowa. Also, the Missouri Pacific and St. Louis-San Francisco will each sponsor an operating battalion, the M.P.'s to be the 759th with headquarters at Little Rock and the Frisco's the 750th with headquarters at Springfield, Mo.

Other units for which agreements have been reached and their location are as follows: New York Central: 701st Railway Grand Division, Buffalo, N. Y.; 721st Railway Operating Battalion, Syracuse, N. Y.; 718th R. O. B., Springfield, Ohio; 753rd Railway Shop Battalion, Beech Grove, Ind.; Pennsylvania: 706th R. G. D., Philadelphia, Pa.; 717th R. O. B., Pittsburgh, Pa.; 724th R. O. B., Philadelphia; 730th R. O. B., Indianapolis, Ind.; 756th R. S. B. (steam), Altoona, Pa.; Atchison, Topeka & Santa Fe: 758th R. S. B. (Diesel), San Bernardino, Calif.; 713th R. O. B., Clovis,

N. M.; Southern: 707th R. G. D., Atlanta, Ga.; 727th R. O. B., Birmingham, Ala.; Union Pacific: 723rd Transportation Railway Operating Battalion, Cheyenne, Wyo.

In his announcement, General Leavey said that "great credit" was due the A.A.R. "for the encouraging response received from the railway industry." He went on to say that "equally successful and encouraging progress has been made in the trucking industry," American Trucking Association, Inc., having promised its "full support" and agreed to affiliate units through its state organizations.

### Vista Dome Coaches on "Q"

Two vista dome coaches were placed in daily operation August 9 on the Chicago, Burlington & Quincy's "Twin Cities Zephyrs," running between Chicago and St. Paul, Minn., and Minneapolis. The new coaches are the first of 14 cars ordered for the two trains, each of which is to consist of a club-lounge car, four vista dome coaches, full-length dining car, and a vista dome observation-parlor car. Albert Cotsworth, passenger traffic manager, said that 30 additional vista dome cars would be delivered late this year and early in 1948 for service on the new "California Zephyrs," operating between Chicago and San Francisco, Cal.

### Several Roads Seek Signaling Order Modification

Among other Class I roads the Wabash and the Missouri Pacific and its affiliated lines have asked the Interstate Commerce Commission to modify its order of June 18 in the Docket No. 29543 proceeding, wherein it required the railroads to install automatic train-stop or train-control systems or automatic cab signal systems on lines over which any train is operated at a speed of 80 m.p.h. or more. As noted in *Railway Age* of August 2, page 55, the Chesapeake & Ohio also has asked the commission to modify its order, the terms of which were outlined in the issue of June 21, page 1264.

The Wabash, stating that at present it has no automatic-train stop or train-control system or automatic continuously controlled cab signal devices, has requested the commission to modify its order so as to permit the operation of one Diesel-electric powered passenger train in excess of 80 m.p.h. In lieu of such immediate modification, the Wabash has asked the commission that it be given until December 31 to conduct a study in order to ascertain comparative costs and the effectiveness of installations required by the order.

The Wabash said that, except for one Diesel-electric powered passenger train, for which the maximum permissible speed is 90 m.p.h., the present highest permissible speed for passenger and freight trains is 80 m.p.h. and 50 m.p.h., respectively. In addition to noting that the density of both passenger and freight operations on its lines is relatively light, the Wabash observed that it is unable to state at this time what the cost would be for the installation by it of train-stop or train-control systems or cab signals as prescribed by the commission's order.

The M.P. and its affiliates seek an extension



Latest Type Seats on Santa Fe's "El Capitan"

Fully reclining and revolving seats with adjustable leg rests have been installed in new cars built for the Atchison, Topeka & Santa Fe's all-chair-car streamliner, "El Capitan." The coaches also feature individual four-position foot-rests which may be adjusted without disturbing fellow passengers. The windows are equipped with non-fogging sash, and are spaced to permit the greatest possible vision for the occupant of each seat.

\* \* \*

until February 16, 1948, within which time to file exceptions to or seek modification of the commission's order. They estimated that compliance with the order would affect approximately 2,693 miles of track and result in an expenditure of \$9,500,000.

The M.P., which is now in the process of reorganization under section 77 of the Bankruptcy Act, asserted that it needs the extension in time in order to complete speed tests and to inform numerous mortgage trustees, creditors committees and the court of any proposed improvement recommendations. The commission had stipulated that exceptions to its order be filed with it within 60 days of June 18.

The M. P.'s request brought a protest from the Railway Labor Executives' Association, which asserted that granting the road's petition would result in an "excessive and unwarranted" delay in accomplishing the purposes of the commission's order.

The Central of Georgia has asked the commission to modify its order to permit the operation of passenger trains at the top speed of 70 m.p.h. on tangent track and 65 m.p.h. on curved track over its line between Ames, Ga., and Central Junction, approximately 182 miles, without installing an automatic block signal system. The C. of Ga. also would operate freight trains at the top speed of 50 m.p.h. on tangent track and 45 m.p.h. on curved track over the same segment.

This road told the commission that it spent \$1,457,600 for special additions and betterments in 1946, including the installation of an automatic block signal system over 183 miles of single track between Americus, Ga., and Birmingham, Ala. It said that it is now in the process of installing centralized traffic control between

Macon, Ga., and Forsyth, approximately 25 miles.

The Illinois Terminal has informed the commission that, in view of its light train weights and because speeds in excess of 60 m.p.h. are reached only in isolated areas, it seeks to be relieved of the necessity of installing an automatic block signal system between Springfield, Ill., and Mackinaw Junction, approximately 53 miles, which is operated under a time card and train order system. The I.T. said that its passenger trains are operated at speeds in excess of 60 m.p.h. only on that portion of its line between St. Louis, Mo., and Peoria, Ill., a major portion of which is protected by automatic block signals.

In another petition filed with the commission, the New York, New Haven & Hartford requests the commission to modify its order to permit that road to continue its definition of medium speed as a speed not exceeding 30 m.p.h. The New Haven said that a comparison of its present definition of restricted speed with that required by the commission's order discloses that the former is actually more restrictive than that prescribed by the I.C.C. The New Haven also noted that its "separate definition" of slow speed is a speed not exceeding 15 m.p.h.

### Baldwin Delivers Locomotive to Indian Government

At a brief ceremony at its Eddystone, Pa., plant, Ralph Kelly, president of the Baldwin Locomotive Works, formally presented to M. Asaf Ali, the Indian ambassador to the United States, the first of 16 streamline Pacific-type locomotives now being built by Baldwin for the railways of India. In his presentation, Mr. Kelly recalled that his company has built a total

of 376 locomotives for India since its original order for 49 in 1899. He pointed out that the journals of the new locomotives are equipped with Timken roller bearings and that they are modern in very respect, including conservative streamlining.

The ambassador, in referring to these locomotives, said that they were streamlined as a psychological factor in publicizing the idea of modernization in the face of the reluctance of the railways to make changes. He said that India had made a start toward supplying its own needs for new equipment and hoped that it might be able to meet all requirements by 1950.

Following the ceremony at the plant the Indian ambassador and a number of other representatives of the Indian government, including the India Supply Mission, were guests of the Baldwin Locomotive Works at dinner.

The 16 streamline Pacific-type locomotives have the following specifications:

Customer .....	India Supply Mission for Government of India
Service .....	Passenger
Gauge of track, ft.-in. ....	5-6
Cylinders, in. ....	20 1/4 by 28
Fuel .....	Soft coal
Working steam pressure, lb. per sq. in. ....	210
Driving wheels, diameter, in. ....	67
Wheel base, driving, ft.-in. ....	12-3
Wheel base, total engine, ft.-in. ....	36-3
Wheel base, engine and tender, ft.-in. ....	68-3
Weight, engine in working order, lb. ....	216,200
Weight of tender loaded, lb. ....	161,280
Tractive force, lb. ....	30,600
Maximum curvature, -deg. ....	10

## P.R.R. Main Line Blocked All Day by Freight Derailment

Derailment of an eastbound freight at a crossover at South Elizabeth, N. J., at 4:50 a.m. August 13 tied up the four main-line tracks of the Pennsylvania at that point, interrupting all train movements in both directions. Coal, bricks and other commodities were strewn on the tracks, and the removal of the debris was slowed up because it was impossible to dump it on the side of the right-of-way in that closely built-up area.

Service over the line was resumed under speed restrictions after the westbound passenger track was opened at 5:18 p.m. (standard time) August 13. The eastbound passenger track was returned to service at 7:00 p.m. the same day, and the two freight tracks were cleared at 7:00 a.m. August 14, with a slow speed order applying to one track.

Shortly after the derailment occurred shuttle service by bus was established in connection with relief and shuttle trains for local service, while through trains were routed in both directions on a detour over the Lehigh Valley between West Newark, N. J., and Bound Brook and the Reading between Bound Brook and Belmont (Philadelphia), Pa. Trains between New York and western points and Washington, D. C., were operated over this detour and continued in service with a few exceptions, though delays of two to three hours resulted.

The hourly New York-Philadelphia trains in each direction were annulled until 12 noon (standard time) August 13, when eastbound service was resumed. Westbound service from New York to Philadelphia was resumed at 1 p.m. These trains fol-

lowed the detour route until the 4 p.m. (standard time) departure from Philadelphia and the 5 p.m. departure from New York, at which time their operation over the Pennsylvania's own line became possible. Additional trains were operated by the Reading-Central of New Jersey between Philadelphia and New York on August 13 while the Pennsylvania line was blocked.

## Air Mail Ton-Miles Drop

United States mail ton-miles flown by the 16 domestic trunk air lines during May decreased 6.54 per cent and express ton-miles increased 20.38 per cent from the corresponding 1946 month, it has been announced by the Civil Aeronautics Board. The C. A. B. said that revenue miles flown and revenue passenger-miles in May increased 3.53 per cent and 9.25 per cent, respectively, over May, 1946.

## Long Island Starts Extensive Ballasting Program

The Long Island recently began work on its program to replace cinders with stone ballast under the terms of its agreement with the New York Public Service Commission to spend \$16,000,000 during the next three years in improving roadbed, passenger cars, motive power and station facilities, according to an announcement by J. C. White, vice-president. This year's schedule, Mr. White said, calls for ballasting 16 miles of the road's double tracks between Jamaica, N. Y., and Rosedale and its quadruple tracks between Rosedale and Valley Stream at a cost of \$15,000 per mile.

Before the end of 1950, the road expects to have 432 miles, or more than 71 per cent of its line, stone ballasted. Mr. White estimated that this ballasting program alone will cost the Long Island approximately \$2,350,000 above the normal cost of maintenance of right-of-way.

## Senate Committee Defers Action on B. & O.-R. F. C. Report

A report embodying the results of an investigation by a subcommittee of the Senate committee on banking and currency of that phase of the Baltimore & Ohio's debt-readjustment plan which involved the extension until 1965 of a Reconstruction Finance Corporation loan in excess of \$80 million will be withheld until members of the subcommittee have had the opportunity to "study it more fully," it has been announced by Senator Tobey, Republican of New Hampshire, committee chairman. The subcommittee's probe of the B. & O.-R.F.C. affiliations, conducted earlier this year, highlighted hearings held to determine whether the R.F.C. should be allowed to continue beyond June 30.

## Freight Car Loadings

Loadings of revenue freight for the week ended August 9 totaled 905,244 cars, the Association of American Railroads announced on August 14. This was a decrease of 16,347 cars, or 1.8 per cent, below the previous week, an increase of 6,158 cars,

or 0.7 per cent, above the corresponding week last year, and an increase of 35,242 cars, or 4.1 per cent, above the comparable 1945 week.

Loadings of revenue freight for the week ended August 2 totaled 921,591 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

## Revenue Freight Car Loading

For the Week Ended Saturday, August 2

District	1947	1946	1945
Eastern .....	163,579	163,710	156,635
Allegheny .....	193,985	194,915	192,056
Pocahontas .....	72,594	72,705	56,338
Southern .....	129,812	128,588	120,722
Northwestern .....	143,202	137,198	131,880
Central Western .....	146,901	135,278	136,306
Southwestern .....	71,518	65,997	69,973
Total Western Districts .....	361,621	338,473	338,159
Total All Roads .....	921,591	898,391	863,910
Commodities:			
Grain and grain products .....	71,603	56,392	63,651
Livestock .....	13,260	16,863	13,457
Coal .....	175,750	184,522	164,419
Coke .....	14,422	13,471	14,058
Forest products .....	50,507	48,812	46,161
Ore .....	84,070	71,030	74,419
Merchandise l.c.l. ....	113,588	123,179	104,399
Miscellaneous .....	398,391	384,122	383,346
August 2 .....	921,591	898,391	863,910
July 26 .....	919,928	910,513	886,430
July 19 .....	919,734	921,496	882,648
July 12 .....	806,961	895,082	883,543
July 5 .....	629,204	679,775	726,663
Cumulative total, 31 weeks .....	25,867,978	23,321,119	25,521,740

*In Canada.*—Car loadings for the week ended August 2 totaled 78,981 cars as compared with 79,848 cars for the previous week and 70,581 cars for the corresponding week last year according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 2, 1947 .....	78,981	35,772
August 3, 1946 .....	70,581	36,242
Cumulative totals for Canada:		
August 2, 1947 .....	2,254,822	1,136,364
August 3, 1947 .....	2,072,289	1,049,346

## Two Roads Draw Fines

The Interstate Commerce Commission has been advised by the district court for the Southern District of Georgia that judgment totaling \$1,200 and costs was entered against M. P. Callaway, trustee of the Central of Georgia, on July 31, as the result of a civil suit in six courts alleging violation of a commission service order prohibiting the use of standard "RS" type refrigerator cars for the transportation of empty beer containers, without the carrier having first obtained the necessary permits.

The commission has been advised by the district court for the Eastern District of Pennsylvania that judgment totaling \$2,000 was entered against the Pennsylvania on May 26 as the result of a civil suit in 10 counts alleging violation of a commission service order requiring all roads to remove refrigerator cars from points of unloading within 24 hours after they have been unloaded and, without delay, place them in outbound trains. The Pennsylvania was charged with failing to comply with the order by holding empty refrigerator cars at points of unloading from two to five days.

## Arbitration Board Continues Wage Case Hearings

Hearings before a six-man arbitration board on the demand of the brotherhoods representing the non-operating railroad employees for increased hourly wage rates moved from the U. S. Appellate Court building in Chicago to the Blackstone Hotel this week. Counsel for the unions completed presentation of their case at the August 13 session and J. Elmer Monroe, assistant director of the Bureau of Railway Economics, Association of American Railroads, appeared as first witness for the carriers. Mr. Monroe told the board that every cent an hour wage increase granted to the employees would cost the carriers about \$40,000,000 annually, and presented figures to show that weekly earnings of the non-operating group were 75 per cent greater during the first quarter of 1947 than they were in 1939.

## 422 Propane Tank Cars Sold to Vets by W. A. A.

The War Assets Administration has allotted 422 propane tank cars among 17 World War II veterans on the provision that all the cars will be utilized for liquefied petroleum gas service for one year. According to the W.A.A., the allocations were made only to veterans certified to purchase the tank cars and followed receipt by the W.A.A. of orders from 82 potential purchasers, including 41 veterans, who sought a total of 4,536 cars.

The W.A.A. said that after federal agencies, whose priority to purchase the cars superseded that of the veterans, made no offers to buy, it disposed of the cars at \$6,484.40 each. Most of the veteran purchasers stated they were engaged in the tank-car leasing business.

Additional general news appears on page 86.

## Supply Trade

**I. H. Welch** has been appointed sales representative covering the central Iowa territory for **Hewitt-Robins, Inc.** Mr. Welch will have headquarters in Des Moines.

**John F. Scott** has been appointed chemical and metallurgical sales representative for the New York district office of the **Globe Steel Tubes Company.**

**E. B. Cleborne**, vice-president and a director of the **Allegheny Ludlum Steel Corporation**, has been elected executive vice-president. He will assume his new duties on September 1.

**Robert J. Drewniak** has been appointed assistant to the president, and **Norman F. Woods**, assistant to the vice-president, of the **Apex Railway Products Company**, at Chicago.

**George M. Egart** has been appointed sales engineer of the **Vapor Car Heating Company**, at Chicago.

**George P. Fisher**, director of personnel of the **Whiting Corporation**, Harvey, Ill., has been elected also a vice-president of the company. **A. J. Grindle**, manager of the foundry equipment department, has been elected vice-president in charge of foundry equipment sales, and **J. Clyde Thomas**, treasurer, has been made secretary and a director of the firm. Mr. Thomas succeeds **R. A. Pascoe**, who has resigned. **Stanley M. Steinko** has been re-elected controller and elected assistant secretary.

**George M. Snyder**, whose appointment as executive metallurgist of the **Woodings-Verona Tool Works**, with headquarters at Verona, Pa., was reported in *Railway Age* of July 26, was born in Verona on June 16, 1916, and received his higher education at the University of Pittsburgh. He holds a B. S. degree in chemical engineering and a M. S. degree in metallurgical engineering. Mr. Snyder began his



George M. Snyder

career as a chemical engineer for the Celanese Corporation of America at Cumberland, Md., and in 1939 joined the Carnegie-Illinois Steel Corporation at its Homestead (Pa.) plant. Prior to leaving the Homestead plant of Carnegie-Illinois, Mr. Snyder was heat-treating procedure foreman and supervisor of tool steel. Late in 1945 he was transferred to the company's general offices as a senior metallurgist, specializing in heat-treating problems.

## OBITUARY

**John R. Holtom**, mechanical expert in the Chicago office of the Westinghouse Air Brake Company, died at his home in Chicago on July 21. Before joining Westinghouse in 1923 Mr. Holtom had been a locomotive engineer for the Michigan Central.

**Louis Everett Young**, vice-president of the export division of the Pullman-Standard Car Manufacturing Company in Buenos Aires, Argentina, until his retirement last November, died there on August 5, it has been reported. Mr. Young was 67 years old.

## Equipment and Supplies

### LOCOMOTIVES

The **UNION PACIFIC** has ordered five 1,500-hp., all-purpose Diesel-electric locomotives and five 2,000-hp. heavy-duty Diesel locomotives from Fairbanks, Morse & Co. Delivery of this equipment is expected to be completed by the end of this year.

### SIGNALING

The **ATLANTIC COAST LINE** has placed orders with the Union Switch & Signal Co. for the signaling materials required to install three electro-pneumatic interlockings at Falling Creek, Va., Emporia, Va., and Weldon, N. C. These interlockings will be of the all-relay type, each involving a 2-ft. 6-in. floor-type control machine, H-2 searchlight high and dwarf signals, and Style A-5 electro-pneumatic switch movements, as well as the necessary relays, rectifiers, transformers and housings. The Falling Creek machine will also control power switches and searchlight signals at Meadows and North Falling Creek by code, and the Weldon control panel will handle the power switches and signal functions at the Barysburg interchange crossovers and the South Weldon yard by code control. The installation will be handled by railroad forces.

The **KENTUCKY & INDIANA TERMINAL** has ordered materials from the General Railway Signal Company for the installation of an all-relay electric interlocking at Louisville, Ky. The control machine, to be installed in Tower X, will have an 18-by 30-in. panel equipped with an illuminated track diagram with 12 signal levers and 10 track-occupancy indication lights. Seven levers for control of the electric switch lock and switch machines will be located on the lower part of the control panel. The units controlled will include 11 electric switch machines, 15 signals and an electric switch lock. The equipment ordered includes Model 5C electric switch machines, Type SA searchlight signals, Model 7 switch circuit controllers and a Model 10 electric switch lock.

### FREIGHT CARS

The **CHICAGO & EASTERN ILLINOIS** has ordered 200 50-ton 40½-ft. steel welded box cars from the American Car & Foundry Co.

The **GULF, MOBILE & OHIO** has ordered 50 70-ton 29-ft. 3-in. steel covered hopper cars from the American Car & Foundry Co.

The **TENNESSEE CENTRAL** has ordered 100 50-ton hopper cars from the American Car & Foundry Co.

The **UNION TANK CAR COMPANY** has ordered 2,000 tank cars, each having a 10,000-gal. capacity, from the American Car & Foundry Co.

The **CHICAGO & ILLINOIS MIDLAND** has ordered 350 70-ton gondola cars from the

Pullman-Standard Car Manufacturing Company.

The PEOPLES GAS, LIGHT & COKE CO. has ordered 10 hopper cars from the Pullman-Standard Car Manufacturing Company.

The CHESAPEAKE & OHIO has ordered 1,000 70-ton steel covered hopper cars from the American Car & Foundry Co. These cars, which are in addition to the 3,000 reported ordered in the *Railway Age* of April 26, will be built in Huntington, W. Va., at an approximate cost of \$3,800,000. Delivery of the first 3,000 cars is expected to start next November and delivery of the additional 1,000 probably will start in the second quarter of 1948. All the cars are to be of welded construction and will be equipped with friction bearings.

## IRON AND STEEL

The LEHIGH & NEW ENGLAND has ordered 1,413 gross tons of rails from the Bethlehem Steel Company.

## Car Service

The Office of Defense Transportation has revoked, effective August 11, Special Allocation Order O.D.T. R-2, as amended, which allocated the use of 423 high pressure liquefied petroleum gas tank cars declared surplus by the War Department. The action followed the recent sale of the cars by the War Assets Administration.

In General Permit O.D.T. 18A, Revised 19A, effective August 8 through October 15, the O.D.T. has authorized the loading of summer apples in bulk to a weight of not less than 29,000 lb. from any point of origin in Virginia.

The O.D.T. also has amended its export controls order 16C to include the United Kingdom in the list of foreign countries exempted from the unit permit requirements for shipments moving via the Port of New York when loaded in box or refrigerator cars. The amendment became effective August 11.

The Interstate Commerce Commission has issued Amendment No. 1 to Service Order No. 760, thereby extending from August 31 to February 15, 1948, its expiration date. The order directs the Chicago, Burlington & Quincy to reroute traffic originating or terminating at points on its Des Moines-Osceola branch between Burch, Iowa, and Des Moines, inclusive, over the Chicago Great Western between Afton Junction, Iowa, and Burch.

The Car Service Division of the Association of American Railroads has cancelled Special Car Order No. 37 (1947 re-issue), which directed the expedited return to home roads of ventilated box cars owned by the Atlantic Coast Line, Central of Georgia, Charleston & Western Carolina, Louisville & Nashville, Seaboard Air Line and Southern. The order had been required in May because of "impending heavy movement of perishable freight, principally watermelons and potatoes, with reduced and possibly inadequate supply of ventilated box cars."

## Construction

ATLANTIC COAST LINE.—This road has awarded a contract to the Paul Smith Construction Company, Gainesville, Fla., for a passenger and freight station and offices at Gainesville. The estimated cost of the project is \$135,000. The road also has authorized the following projects, the probable costs of which are shown in parentheses: Laying track and constructing a platform and driveway at Gainesville (\$52,650); Laying track and constructing a platform at Tampa, Fla. (\$29,971); and laying tracks at Cordele, Ga. (\$46,000).

BALTIMORE & OHIO.—This road has awarded the following contracts: To the Baker & Hickey Co., Columbus, Ohio, for reconstructing bridge No. 7 at Schick, Ohio; to the John F. Casey Company, Pittsburgh, Pa., for changes and additions to the substructure of bridge No. 106.37 at East Salamanca, N. Y., for the construction of wings and a backwall for the east pier at bridge No. 111.67 at Carrollton, N. Y., and for the reconstruction of bridge No. 112.77 at Riverside Junction, N. Y.; and to the American Bridge Company, Baltimore, Md., for the erection of superstructures for bridges No. 79 (Valley City, Ohio), No. 94 (Berea, Ohio), and No. 83/25 (Fleming, Ind.).\* The total cost of these projects is estimated to be \$200,000.

CANADIAN PACIFIC.—This road is developing plans for the construction in Montreal of Canada's first "hump retarder" freight yard. The site of the yard is roughly from the Canadian National's Jacques Cartier subdivision on the west, to the northerly limit of the town of Hampstead and extending southward through Cote St. Luc to join the C.P.R. to Toronto and Ottawa at Ballantyne Junction. In addition to the tracks and switches of the classification, receiving, departure and auxiliary service yards, 16 new terminal buildings are proposed. The start of construction and the extent of the facilities to be provided will be influenced by the road's revenue outlook.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—Division 4 of the Interstate Commerce Commission has authorized this road to construct, in lieu of a line to be abandoned, as noted elsewhere in this issue, a new segment between Armour, Ind., and Lowell, approximately 6.7 miles. Cost of the new line, estimated at \$480,000, will be financed by funds from the applicant's treasury and is expected to be completed within six months from July 1.

NEW YORK, CHICAGO & ST. LOUIS.—This road has awarded a contract to E. J. Benes & Co., Cleveland, Ohio, for the construction of Diesel-electric locomotive servicing facilities at East 75th street in Cleveland. The project will cost approximately \$375,000.

The PENNSYLVANIA has awarded a contract to the Trimble Company, Pittsburgh, Pa., for repairing stock pens at Herr's Island, Pittsburgh. The approximate cost of the work is \$25,000.

TERMINAL OF ST. LOUIS.—This road and its lessor, the Madison, Illinois & St. Louis, have been authorized by Division 4 of the Interstate Commerce Commission to construct a line extending approximately 0.5 mile from a connection with the M. I. & St. L. at Brooklyn, Ill., to Venice. The line will be located in the vicinity of East St. Louis, close to the Mississippi River. Cost of the construction, scheduled to be completed by April 1, 1948, is estimated at \$150,000, including \$69,000 for certain auxiliary tracks. The division rejected the applicants' contention that the proposed line would be a spur or industrial track within the meaning of Section 1(22) of the Interstate Commerce Act and thus exempt from commission jurisdiction.

## Financial

CHESAPEAKE & OHIO.—*Distribution of Nickel Plate Stock.*—This road and the Alleghany Corporation have applied to the Interstate Commerce Commission for authority to distribute to approximately 88,000 C. & O. common stockholders as a dividend that road's entire holdings of 192,400 shares of New York, Chicago & St. Louis common stock. As noted in *Railway Age* of August 9, page 78, the transaction was approved by the C. & O.'s board of directors. It would mean a distribution of approximately one-fortieth of a share of Nickel Plate for each share of C. & O. common.

The Alleghany Corporation, which controls the C. & O., has requested the I. C. C. to issue an order stipulating that distribution of the stock does not require approval by the commission, or, if approval is required, that the commission grant the necessary authority. Under the plan, Alleghany, which holds 516,234 shares of C. & O. common stock, would receive 12,906 shares of Nickel Plate stock. Alleghany said that it "expressly agrees that it will hold said shares, pending their sale or other disposition, solely as an investment," and that it does not intend to use the securities as a means of exercising any control over the Nickel Plate, now controlled by the C. & O.

The C. & O. also said that as a part of the transaction it plans to purchase 2,778 additional shares of Nickel Plate stock in the "open market."

CENTRAL OF NEW JERSEY.—*Annual Report.*—Operating revenues of this road last year amounted to \$41,896,468, compared with \$55,546,969 in 1945. Operating expenses totaled \$38,136,554, compared with \$46,449,106. Fixed charges were \$3,803,406, compared with \$4,770,100. The net deficit was \$1,978,525, compared with a net deficit of \$3,684,836. Current assets at the end of the year were \$17,523,275, compared with \$28,905,562. Current liabilities were \$9,458,367, compared with \$20,279,419. Long term debt was \$50,316,184, compared with \$51,216,110.

CLINCHFIELD.—*Annual Report.*—Operating revenues of this road last year were \$13,228,934, compared with \$13,196,914 in

1945. Operating expenses totaled \$7,804,517, compared with \$8,757,153. Fixed charges amounted to \$2,254,504, compared with \$2,224,565. Net income was \$2,257,943, compared with \$1,147,696. Current assets at the end of the year were \$6,399,809, compared with \$7,187,302. Current liabilities were \$5,089,289, compared with \$3,670,793. Long term debt was \$6,852,989, compared with \$2,823,115.

**DENVER & RIO GRANDE WESTERN.—Annual Report.**—Although this railroad's reorganization plan was not consummated until last April, the effective date of the plan was fixed by the Interstate Commerce Commission and the federal court as of January 1, 1943. Therefore, the following income figures give effect to the reorganization plan, including the merger of the Denver & Salt Lake and the Denver & Salt Lake Western, on the basis of the reorganized railroad's new capitalization. Operating revenues in 1946 totaled \$54,363,959, compared with \$78,277,344. Operating expenses were \$46,521,675, compared with \$63,196,993. Fixed charges were \$2,304,029, compared with \$2,429,754. The net deficit after fixed charges and other deductions was \$1,595,813, compared with a net deficit of \$4,610,148.

**DELAWARE, LACKAWANNA & WESTERN.—Equipment Trust Certificates.**—Subject to Interstate Commerce Commission approval, this company has sold \$2,800,000 of series F equipment trust certificates to Halsey, Stuart & Co., and associates on a bid of 99.265 for an annual interest rate of 2½ per cent. The certificates were reoffered to the public at prices yielding from 1.25 per cent to 2.40 per cent, according to maturity. (See *Railway Age* of August 2, page 216).

**DULUTH, SOUTH SHORE & ATLANTIC.—Reorganization Plan.**—The Interstate Commerce Commission has received a stipulation, entered into by committees representing \$1,971,000 of this road's first mortgage 5 per cent bonds and by the Canadian Pacific, as holder of various bonds of this road and the Mineral Range, its subsidiary, to the effect that they will not oppose the plan for this road's reorganization approved by the commission (outlined in *Railway Age* of July 5, page 63) and that, if submitted for approval by ballot, without further changes or modifications, they will vote for its adoption.

**HOBOKEN MANUFACTURERS.—Reorganization Expenses.**—Division 4 of the Interstate Commerce Commission has approved \$15,000 as the limit of final allowance to be paid James D. Carpenter, Jr., and associates, as counsel for the debtor's trustee, Forrest S. Smith, in connection with the reorganization proceedings of this road. The fee covers the period from January 1, 1946, to December 31, 1946.

**HOBOKEN MANUFACTURERS.—Reorganization Averted.**—Division 4 of the Interstate Commerce Commission has authorized the trustee of this road to withdraw his proposed plan of reorganization. The United States district court before which the proceedings for reorganization under section 77 of the Bankruptcy Act were pending issued an order on January 27 for

the termination of operation of the road by the trustee, effective December 31, 1946, in view of agreements for the settlement of claims that eliminated the necessity for reorganization.

**ILLINOIS CENTRAL.—Equipment Trust Certificates.**—This company has sold \$1,200,000 of series X equipment trust certificates to the Mercantile Commerce Bank & Trust Co., St. Louis, Mo., on a bid of 99.3705 for an annual interest rate of 2 per cent. These certificates are part of a total authorized amount of \$4,400,000 of series X certificates. (See *Railway Age* of July 26, page 177.) The road also has sold \$2,500,000 of series Y equipment trust certificates to Harris, Hall & Co. and associates on a bid of 99.403 for a 2 per cent coupon. The certificates are part of a total authorized amount of \$11,360,000 of series Y certificates. They were reoffered to the public at prices yielding from 1.15 per cent to 2.25 per cent, according to maturity. (See *Railway Age* of August 2, page 216.)

**MISSOURI PACIFIC.—Reorganization Plan Opposed.**—Robert R. Young, chairman of the Alleghany Corporation, in a letter sent to Missouri Pacific security holders dated August 5, urged them to vote against the reorganization plan. Alleghany, the letter said, is voting the following Missouri Pacific system bonds against the plan: M. P. first and refunding bonds, \$3,310,000; New Orleans, Texas & Mexico first mortgage bonds, \$659,000; International-Great Northern first mortgage bonds, \$1,196,000; and M. P. convertible 5½ per cent bonds, \$11,152,000.

"It is essential to the preservation of a sound transportation system and the national defense than money honestly invested in railroad properties . . . shall be adequately protected," Mr. Young's letter said. "This can only be accomplished in the Missouri Pacific system by a new plan of reorganization. Such a plan has been prepared and will be presented as soon as the present plan is rejected. This new plan, sponsored by Alleghany, is supported by substantially all the committees and trustees representing the various classes of investors and will benefit senior holders as well as junior holders.

**NEW JERSEY & NEW YORK.—Reorganization Expenses.**—Division 4 of the Interstate Commerce Commission has approved \$6,000 per year to be paid Peter Duryee, trustee, and \$7,500 per year to be paid Walter T. Margetts, Jr., as counsel for the trustee, in connection with the reorganization proceedings of this road. The fees cover the period from June 30, 1947, to June 30, 1948.

**NEW YORK, NEW HAVEN & HARTFORD.—Plan of Reorganization.**—The reorganization committee for this road has applied to the Interstate Commerce Commission for authority to change, subject to court approval, the effective date of the New Haven's plan of reorganization from July 1, 1943, to July 1, 1947, and to pay in cash unpaid interest accrued on secured claims between those two dates.

**SOUTHERN.—Atlantic & Danville Lease.**—The Southern has notified the Atlantic & Danville that it will not renew the lease of the A. & D.'s line which expires on

July 1, 1949. The leased line has been operated by the Southern since 1899. In recent years it has been used for moving only local freight because the Southern has been moving through freight to and from Portsmouth, Va., over the Atlantic Coast Line under a trackage agreement. The A. & D. has outstanding \$3,925,000 of first mortgage 4 per cent bonds and \$1,525,000 of second mortgage 4 per cent bonds. Both issues mature on July 1, 1948.

**TENNESSEE CENTRAL.—R. F. C. Loan.**—This road has asked the Interstate Commerce Commission to approve a loan to it of \$250,000 from the Reconstruction Finance Corporation. The applicant said it plans to apply the proceeds toward working capital and to meet current obligations. As security, it would pledge its Series A 4 per cent first mortgage bonds, due in 1967. (See *Railway Age* of August 9, page 79.)

**WABASH.—Trackage Rights.**—This company has asked the Interstate Commerce Commission to approve a 50-year agreement dated April 1 under which it will continue to operate over a Missouri river bridge leading into Kansas City, Mo., owned by the Chicago, Burlington & Quincy. The Wabash has been operating over the bridge and adjacent facilities under various agreements since 1880.

## Average Prices Stocks and Bonds

	Aug. 12	Last week	Last year
Average price of 20 representative railway stocks . .	48.43	49.26	62.16
Average price of 20 representative railway bonds . .	89.66	90.04	97.99

## Dividends Declared

Chesapeake & Ohio.—common, 75¢, quarterly, payable October 1 to holders of record September 8; 3½% convertible preferred, 87½¢, quarterly, payable November 1 to holders of record October 8.  
North Pennsylvania.—\$1.00, quarterly, payable September 10 to holders of record September 3.  
Pittsburgh, Youngstown & Ashtabula.—7% preferred, \$1.75, quarterly, payable September 2 to holders of record August 20.

## Abandonments

**CHICAGO, INDIANAPOLIS & LOUISVILLE.**—Division 4 of the Interstate Commerce Commission has authorized this road to abandon that portion of its main line extending from Armour, Ind., to Lowell, approximately 6.7 miles. The commission, which, as noted elsewhere in this issue, has authorized the applicant to construct a parallel line between the same points, found that the abandonment and new construction will (1) reduce the cost of maintenance; (2) avoid the hazards of operation over the old segment; and (3) eliminate curvature, thereby permitting faster, safer and more economical operation of freight and passenger trains.

**NELSON & ALBERMARLE.**—Division 4 of the Interstate Commerce Commission has authorized this road to abandon that portion of its line extending from Schuyler, Va., to a point near Rockfish, and to abandon operation over a connecting track of the Southern extending from the point of

termination of the aforementioned segment to Rockfish, a total distance of approximately 4.5 miles. The commission's report noted that the Rockfish river, which parallels the line, has risen to within a few feet below the track level, resulting in high water frequently damaging the road bed. "The line," the commission said, "is in such condition that it is unsafe for continued operation."

**PITTSBURGH & WEST VIRGINIA.**—Division 4 of the Interstate Commerce Commission has authorized this road to abandon portion of its so-called Pittsburgh branch line including approximately 1.2 mile of main track and other facilities, including a bridge across the Monongahela river and certain terminal properties, all located within Pittsburgh, Pa. The commission, which approved the transaction subject to the usual employee-protection conditions, observed that the properties have been unfit for service since a March, 1946, fire which destroyed its freight station.

The applicant, which used the branch only to provide limited service to several industries, is of the opinion that reconstruction is unwarranted, either by the revenues to be anticipated from resumption of operations or by the public interest, and that based on present scrap prices, the estimated salvage value of the recoverable material in the line will not equal the cost of demolition. The commission found that cost of rehabilitating the line would be "wholly out of proportion" to the public convenience that such operations would provide.

**PENNSYLVANIA.**—Division 4 of the Interstate Commerce Commission has authorized this road and its lessor, the Grand Rapids & Indiana, to abandon, including abandonment of operation by the former, 1,942 ft. of track, including terminal facilities, in Traverse City, Mich. The abandonment, which will permit the reconstruction of state highways through Traverse City, will result in the relocation of the applicants' terminal facilities there. The commission approved the abandonment subject to the usual employee-protection conditions.

**TREMONT & GULF.**—Division 4 of the Interstate Commerce Commission has authorized this road to abandon that portion of its so-called Denkman Extension, Rochelle District, extending from Grandstaff, La., to Waggoner, approximately 3.2 miles. No traffic has been offered for shipment over the line since January, 1941.

**UNION PACIFIC.**—Division 4 of the Interstate Commerce Commission has authorized this road and its lessor, the Oregon-Washington Railroad & Navigation, to abandon, including abandonment of operation by the former, that portion of the so-called Pendleton-Tucannon branch extending approximately 5.3 miles from a point near Alto, Wash., to a point near Relief.

**UNION PACIFIC.**—This road has applied to the Interstate Commerce Commission for authority to abandon a branch extending 22.1 miles from Boelus, Nebr., to Pleasanton. No traffic has moved over the line since June 22, when it was damaged by floods.

## Organizations

The next regular meeting of the **Pacific Coast Transportation Advisory Board** will be held September 18 and 19, at the Leamington Hotel, Oakland, Cal.

The **Traffic Club of St. Louis (Mo.)** will hold its annual mid-summer dinner dance and golf outing at the Norwood Hills Country Club on Tuesday, August 19.

## Railway Officers

### EXECUTIVE

**J. K. Dent**, whose election as vice-president, traffic, of the Louisville & Nashville, at Louisville, Ky., was reported in the *Railway Age* of July 26, was born at Leitchfield, Ky., on June 6, 1888, and entered the general freight office of the L. & N., at Louisville, on September 5, 1905. He transferred to the office of the vice-president, traffic, in 1912, and in 1921 became junior assistant to the vice-pres-

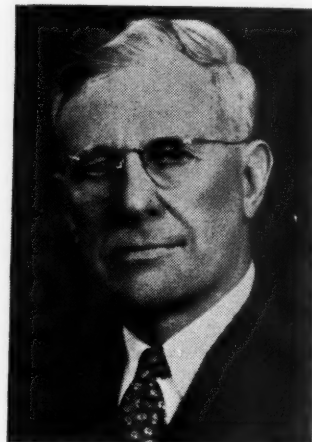


**J. K. Dent**

ident. In September, 1923, he was named assistant general freight agent, and in January, 1935, he was appointed senior assistant to the vice-president. Mr. Dent was promoted to general coal freight agent on November 1, 1939, and on May 1, 1945, he was advanced to coal traffic manager, at Louisville, the position he held at the time of his recent election.

**J. E. Tilford**, whose election as executive vice-president of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in the *Railway Age* of July 26, was born at Atlanta, Ga., on July 12, 1888, and prior to federal control of the railroads during World War I he served as assistant general freight agent of the Atlanta, Birmingham & Coast (part of the Atlantic Coast Line). From 1918 to 1920 he was assistant general freight agent of a group of southern railroads, chairman of the general routing committee

of the Southern Region, United States Railroad Administration, and member of the Atlanta District Freight Committee. In 1920 Mr. Tilford was appointed assistant to the freight traffic manager of the L. & N., at Louisville, and on March 1, 1928, he was elected chairman of the Southern Freight Association, with headquarters at Atlanta, Ga. He returned to



**J. E. Tilford**

the L. & N. on February 15, 1937, as assistant vice-president, traffic, at Louisville, and on April 19, 1945, he was advanced to vice-president, traffic, the position he held at the time of his recent election.

**J. R. Kimpton**, general superintendent of the Ontario district of the Canadian Pacific at Toronto, Ont., has been appointed assistant vice-president, department of personnel, at Montreal, Que. Mr. Kimpton entered the service of the Canadian Pacific as a clerk in the office of the superintendent at Montreal, serving sub-



**J. R. Kimpton**

sequently as stenographer, general clerk, and assistant accountant, transferring to the office of the general manager there in 1923. In 1926 he was appointed statistician and in 1931, chief clerk in the personnel department. Mr. Kimpton advanced to assistant superintendent of the Bruce division at Toronto, Ont., in 1937, then to operating superintendent of the Woodstock division, and later, superintendent of the Laurentian division. He was promoted to assistant manager of the department of personnel at Montreal in 1943, and again advanced in

# New Revenue from *streamlined scheduling*

Modern steam locomotives are powerful, fast, and capable of keeping heavy payloads moving at high speed over difficult terrain. But, they cannot produce revenue when they are lying in the yards awaiting re-assignment.

which your modern steam locomotive was designed. A series of availability studies followed up by revisions in scheduling will pay quick returns. It will prove conclusively that the modern steam locomotive is, and will continue to be, a potent factor in *economical* railroading.

Get the high monthly mileage for

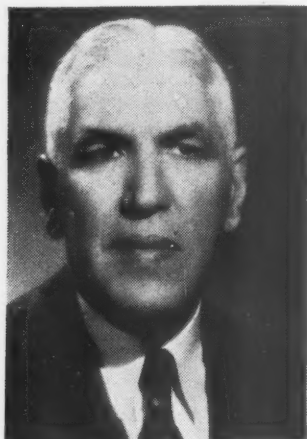
LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

1945 to assistant to the vice-president at Toronto. Mr. Kimpton was appointed general superintendent of the Quebec district at Montreal in March, 1946, transferring to the Ontario district at Toronto last January.

**J. A. Moran**, whose appointment as assistant to the president of the St. Louis-San Francisco, at Memphis, Tenn., was reported in *Railway Age* of August 2, was born at Springfield, Mo., and entered the service of the Frisco in 1907 as a telegrapher at Osceola, Ark., where he became agent on September 1, 1909. In 1913 he was named assistant superintendent at Chaffee, Mo., whence, three years later, he was transferred to Amory, Miss. On



**J. A. Moran**

December 15, 1923, Mr. Moran was promoted to superintendent of the River division, at Chaffee; he was transferred to the Eastern division on April 1, 1930, and to the Northern division on June 1, 1932. On May 1, 1939, he was appointed superintendent of the Southern division at Memphis, where he remained until the time of his recent promotion.

#### FINANCIAL, LEGAL AND ACCOUNTING

**James G. McDonough, Jr.**, whose appointment as assistant general counsel of the Seaboard Air Line at Norfolk, Va.,



**James G. McDonough, Jr.**

was reported in *Railway Age* of August 9, was born at Fort Smith, Ark., and was graduated from Yale College and Yale

Law College. After practicing law for a short period in his home town, he began his railroad legal career as attorney for the Kansas City Southern, in which capacity he served for seven years. Later he went with the New York law firm of Cravath, Swaine & Moore and participated in the proceedings which resulted in the reorganization of the Seaboard in 1946. He was with that firm at the time of joining the Seaboard staff.

**William J. Butler**, general attorney of The Pullman Company, at Chicago, has been advanced to general counsel. Succeeding Mr. Butler is **M. R. Wendt**, assistant general solicitor, who in turn is succeeded by **D. S. Dugan**.

**George W. Petersen**, district claim agent of the Union Pacific at Omaha, Neb., has been promoted to assistant general claim agent there.

#### OPERATING

**H. A. Moffitt**, has been appointed superintendent agencies of the Chesapeake & Ohio with headquarters at Huntington, W. Va., succeeding **F. J. Ginn**, who has retired.

**J. F. Meredith** has been appointed superintendent of the Clinchfield, at Erwin, Tenn., succeeding **W. T. Wohlford**, who has retired after 38 years of service. **D. H. Hendrix** has been appointed trainmaster, with headquarters at Erwin.

**H. H. Best** has been appointed general superintendent of the Toledo, Peoria & Western, with headquarters at East Peoria, Ill. He served as general manager of the road during the period of federal operation, 1944 to 1947. **R. B. Gifford**, acting superintendent, has been advanced to superintendent, with headquarters as before at Peoria, Ill.

**F. E. Kalbaugh**, assistant superintendent of the Western division of the Southern Pacific, at Oakland, Cal., has been promoted to superintendent of transportation, with headquarters at San Francisco, Cal. He is succeeded by **A. S. McCann**, assistant division superintendent at Los Angeles, Cal.

**J. J. O'Toole**, whose appointment as general superintendent of terminals of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, was reported in the *Railway Age* of August 2, was born at Chicago on September 28, 1897, and received his higher education at DePaul University in that city. He entered railroad service on November 13, 1912, as a switchmaster on the Milwaukee, and has spent his entire railroad career with that road. He served as switchman from June, 1914, to March, 1916, and in various clerical positions from 1916 to 1925, when he became assistant chief clerk to the general manager. From July to December 1, 1936, he was outside representative, and on the latter date was promoted to trainmaster at Minneapolis. Mr. O'Toole was advanced to assistant superintendent in September, 1938, with headquarters at Wausau, Wis., and on December 1, 1939, he was transferred to Milwaukee, Wis. On January 1, 1946, he was advanced to superintendent,

with headquarters at Minneapolis, Minn., the position he held at the time of his recent promotion.

**W. L. Mueller**, whose promotion to general manager, Western district, of the Chicago & North Western, at Omaha,



**W. L. Mueller**

Neb., was reported in the *Railway Age* of July 5, was born at Norfolk, Neb., on November 4, 1895, and entered the service of the North Western in 1914 as a stenographer, at Norfolk. From 1919 to 1935 he served as chief clerk to the superintendent, at Chadron, Neb., and at Norfolk, and from 1935 to 1937 as chief clerk to the assistant general superintendent, with the same headquarters. On April 16, 1937, Mr. Mueller was appointed trainmaster at Mason City, Iowa, and on December 1, 1939, he was appointed assistant superintendent at Casper, Wyo., whence on January 4, 1942, he was transferred to Sioux City, Iowa. On September 15, 1942, he was advanced to superintendent at Huron, S. D., the position he held at the time of his recent promotion.

**G. N. Curley**, assistant to the vice-president and general manager of the Eastern lines of the Canadian Pacific at Toronto, Ont., has been appointed general superintendent of the Ontario district, with the same headquarters. Mr. Curley entered



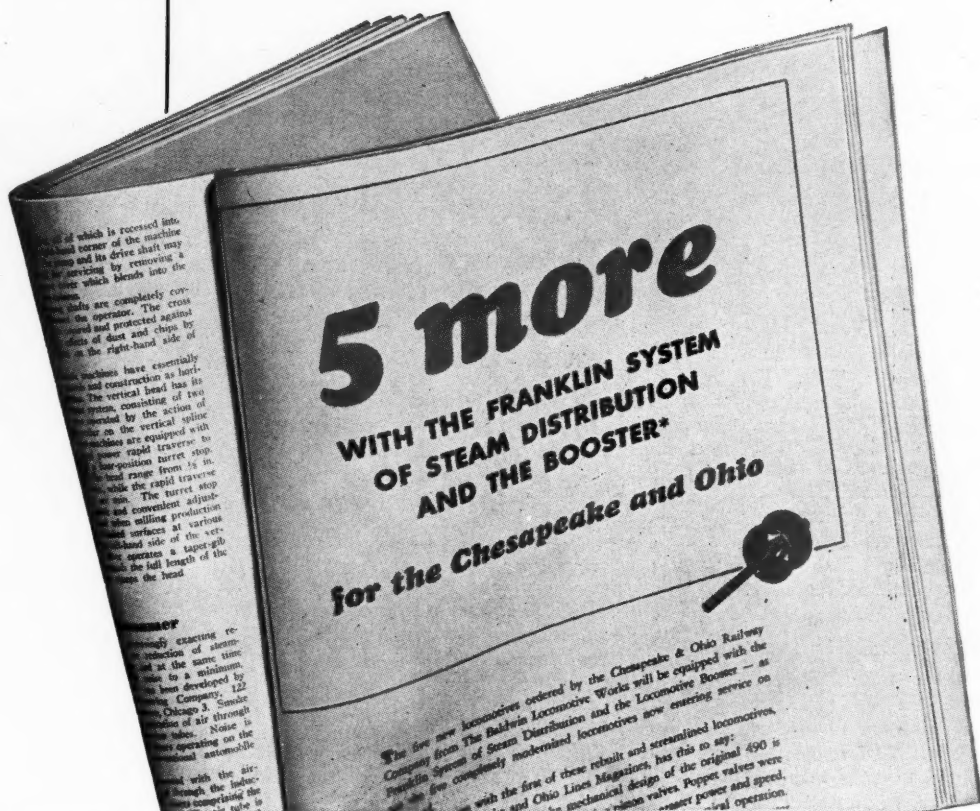
**G. N. Curley**

the service of the Canadian Pacific in 1916 as a stenographer in the general manager's office at Montreal, Que., becoming clerk-

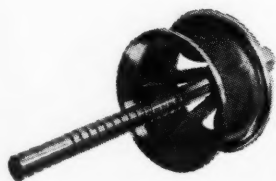


**WILL USE**

**TYPE  
B**



*A full-size running model of the Franklin System of Steam Distribution Type B will be exhibited at the Allied Railway Supply Association Exhibit, Hotel Sherman, Chicago, September 15, 16, 17 and 18.*



The Franklin System of Steam Distribution, Type B — with poppet valves, rotary drive, and continuous-contour cams — will be applied to the new 4-6-4 locomotives recently ordered by the Chesapeake & Ohio from the Baldwin Locomotive Works.



**FRANKLIN RAILWAY SUPPLY COMPANY, INC.**

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS  
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

August 16, 1947

79

accountant at Farnham, Que., in January, 1918, and leaving for military service with an engineering battalion in April of that year. He returned in November, 1918, and served in various clerical positions at Farnham and Montreal until 1937, when he was appointed traveling car service agent, later being advanced to acting assistant superintendent. Mr. Curley held posts as assistant superintendent at Toronto and at Brownsville Junction, Me., from 1940 until 1944, when he was appointed superintendent of the Farnham division. In March, 1946, he was appointed assistant to the vice-president and general manager at Toronto.

## TRAFFIC

**J. H. Hatcher**, executive general agent of the Atlantic Coast Line at Washington, D. C., has been appointed assistant passenger traffic manager, with headquarters at Wilmington, N. C.

**O. K. Daly**, general agent of the Canadian National at Seattle, Wash., has been transferred to the freight department at Pittsburgh, Pa., succeeding **W. J. Hickey**, who has retired on pension after 48 years of railroad service.

**Thomas R. Monroe**, commercial agent of the Southern system at Charlotte, N. C., has been promoted to district freight agent at Birmingham, Ala., succeeding **A. D. Fleming**, whose promotion to division freight agent at Birmingham was reported in the *Railway Age* of July 19, page 131.

**H. V. Cook**, whose promotion to general freight agent of the St. Louis-San Francisco, at St. Louis, Mo., was reported in the *Railway Age* of July 26, was born at West, Tex., on August 1, 1898, and entered the service of the Frisco in September, 1920, and served as clerk, agent and rate clerk, Southern division, until November, 1924, when he became rate clerk, traffic department, at Memphis, Tenn. In January, 1926, Mr. Cook was named traveling freight agent, at Blytheville, Ark., and in September, 1927, he was transferred to the general offices, at St. Louis, where he served as executive clerk, commerce clerk,



**H. V. Cook**

and chief clerk. On October 31, 1938, he was advanced to assistant general freight agent, the position he held at the time of his recent promotion.

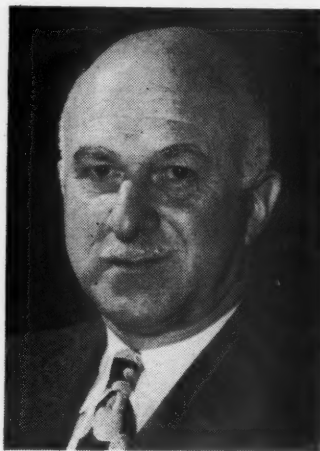
**T. M. Shalloe**, whose appointment as general freight agent of the New York Central system at New York was reported in *Railway Age* of August 2, was born at Buffalo, N. Y., and joined the New York Central there in 1922 as a rate clerk. In



**T. M. Shalloe**

1926 he was promoted to chief clerk, becoming general agent at Buffalo in 1929 and division freight agent at Rochester, N. Y., in 1936. Two years later Mr. Shalloe became assistant general freight agent at Syracuse, N. Y., transferring to Albany, N. Y., in 1941, and to New York in 1943.

**H. D. Vail**, whose appointment as general freight agent of the New York Central system at New York was reported in *Railway Age* of August 2, was born at Pawl-



**H. D. Vail**

ing, N. Y., where he joined the New York Central in 1911 as a freight clerk. After being transferred to New York, Mr. Vail was named city freight agent in 1923 and was promoted to chief perishable agent in 1935. Two years later he became general agent at Newark, N. J., returning to New York in 1940 as assistant general eastern freight agent. The next year he became general eastern freight agent and in 1943 he was appointed assistant general freight agent, the position he held until his recent promotion.

**J. M. Fowler**, general agent of the Illinois Terminal at New York, has been appointed assistant general freight and pas-

senger agent, with headquarters at Pittsburgh, Pa. **R. W. Reckard** remains as general agent at Pittsburgh.

**A. D. Leonard**, traveling freight agent of the Delaware, Lackawanna & Western at Minneapolis, Minn., has been appointed general agent, with the same headquarters, succeeding **L. L. Newell**, deceased.

**Robert Huersch** has been appointed traffic manager of the Toledo, Peoria & Western at Los Angeles, Cal. He was recently assistant to the western freight traffic manager of the Chicago, Rock Island & Pacific at Los Angeles, and had served previously with the T. P. & W. for sixteen years. **A. P. Vandergrift** has been appointed general agent at Memphis, Tenn. **C. H. Miller** has been appointed general agent at Peoria, Ill.

**J. C. Weltch**, general agent of the Chicago & Eastern Illinois, at New Orleans, La., has been transferred to Atlanta, Ga., to succeed **G. H. Rudolph**, who has retired. **W. C. Sullivan**, commercial agent at Birmingham, Ala., has been appointed general agent at New Orleans, succeeding Mr. Weltch.

**E. A. Olson**, whose promotion to assistant freight traffic manager of the Minneapolis, St. Paul & Sault Ste. Marie at Chi-

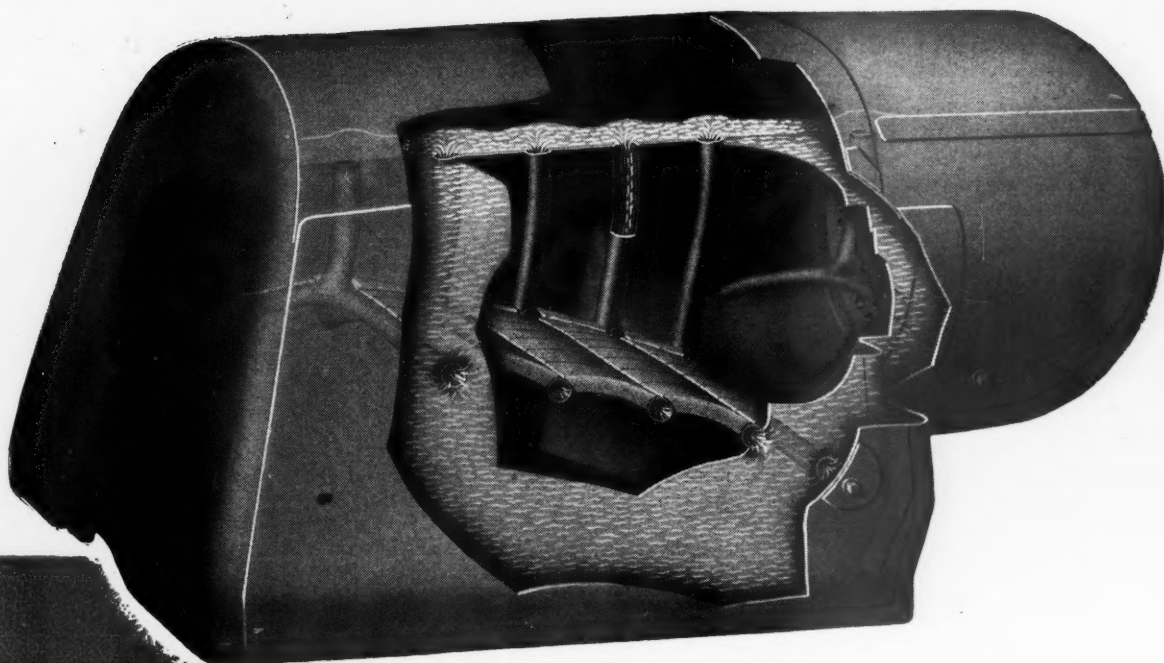


**E. A. Olson**

cago, was reported in *Railway Age* of August 2, was born at Minneapolis, Minn., on July 13, 1910, entered the service of the Soo Line in June, 1927, and served in various positions in the freight and passenger departments at Minneapolis until January, 1931, when he became secretary to the vice-president in charge of traffic. In January, 1936, Mr. Olson was named chief clerk to the vice-president in charge of traffic, and he served in that capacity until May 1, 1939, when he was appointed district freight agent at Duluth, Minn. In July, 1941, he was advanced to assistant general freight agent at Minneapolis, the position he held at the time of his recent promotion.

## ENGINEERING & SIGNALING

**R. A. Sharood** has been appointed chief engineer of the Alaska, with headquarters at Anchorage, Alaska, succeeding **G. W. Colwell**, who has retired. Mr. Sharood



**THREE  
WAYS by which  
Security Circulators  
assist in maintaining  
the full steaming capacity  
of a locomotive...**

Security Circulators appreciably add to the effective heating area of a boiler.

Security Circulators improve the circulation of water in the side water-legs and over the crown sheet.

Security Circulators lessen honey-combing, flue plugging and cinder cutting.

Security Circulators are being applied to many fleets of existing locomotives, as well as being specified for new motive power.

**AMERICAN ARCH COMPANY, INC.**

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

was previously assistant engineer of track of the Northern Pacific at St. Paul, Minn.

**H. D. Brydone-Jack**, manager of the department of personnel of the Canadian Pacific at Montreal, Que., has been appointed engineer of construction at Montreal. A photograph of Mr. Brydone-Jack and a sketch of his career appeared in *Railway Age* of November 23, 1946, page 908.

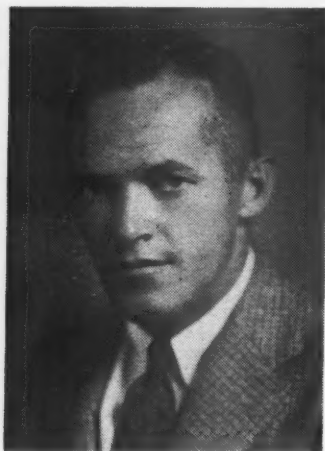
**A. R. Harris**, whose promotion to engineer of bridges of the Chicago & North Western at Chicago, was reported in *Rail-*



**A. R. Harris**

*way Age* of July 5, was born at Cameron, Mo., on April 26, 1897, and received his higher technical training at the University of Missouri. He entered the service of the North Western in April, 1923, and served as engineering draftsman and designer until 1940. In the latter year Mr. Harris was promoted to office engineer, with headquarters at Chicago, and in 1941 he was advanced to assistant engineer of bridges, with the same headquarters, the position he held at the time of his recent promotion.

**John William Hopkins**, whose appointment as engineer bridges and buildings of the Bessemer & Lake Erie at Greenville,



**John William Hopkins**

Pa., was reported in *Railway Age* of August 9, was born at Philadelphia, Pa., on November 13, 1903. Mr. Hopkins attended Lehigh University and received his B.S. in civil

engineering from Pennsylvania State College in 1925. He was employed as draftsman, inspector and assistant engineer, successively, with James B. Long, Norristown, Pa., from 1925 to 1930; in the latter year he went with the Pennsylvania department of highways at Franklin, Pa., serving for six months as bridge designer and for five years as division bridge engineer. Entering railroad service in 1936 as designing engineer with the Bessemer & Lake Erie, Mr. Hopkins served as supervisor of track from June, 1939, to September, 1943, when he became principal assistant engineer, the position he held at the time of his recent appointment.

**John Edward Yewell**, whose appointment as assistant to chief engineer of the Bessemer & Lake Erie at Greenville, Pa., was reported in *Railway Age* of August 9, was born on June 23, 1892, at Baltimore, Md. Mr. Yewell attended Baltimore Polytechnic Institute and received his civil engineering degree from Cornell University



**John Edward Yewell**

in 1912. Entering railroad service in August, 1912, as axman on a surveying corps with the Baltimore & Ohio, he became draftsman in the maintenance of way department of the Bessemer & Lake Erie in January, 1913. One year later he transferred to the valuation department in a similar capacity, while he became chief draftsman in the maintenance of way department in April, 1917. He held the latter position until December, 1936, when he was appointed track supervisor. Mr. Yewell was appointed engineer bridges and buildings in July, 1939, which position he held until his recent promotion to assistant to chief engineer.

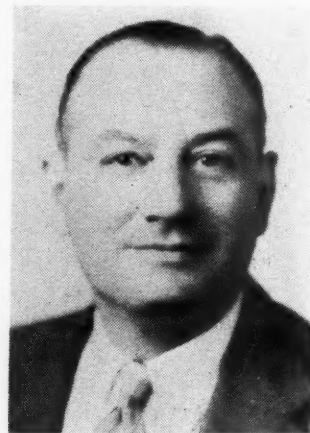
## MECHANICAL

**W. C. Baker, Sr.**, general car foreman of the Seaboard Air Line at Tampa, Fla., has been appointed assistant superintendent car department, with the same headquarters.

**F. J. Hiers**, foreman light repair yard at Portsmouth, Va., has been appointed assistant superintendent car department, with the same headquarters.

**W. F. Kascal**, whose promotion to superintendent of motive power of the Colorado & Southern (part of the Burlington

System), at Denver, Colo., was reported in the *Railway Age* of July 26, was born on October 20, 1901, and entered the service of the Burlington in 1922 as a machinist, at Brookfield, Mo. In 1927 he was appointed roundhouse foreman, and



**W. F. Kascal**

served in that capacity at various points until July 1, 1939, when he became general foreman, at Lincoln, Neb. On April 27, 1943, Mr. Kascal was advanced to master mechanic of the C. & S., at Denver, the position he held at the time of his recent promotion.

**O. A. Garber**, whose retirement as chief mechanical officer of the Missouri Pacific at St. Louis, Mo., was reported in *Railway Age* of August 9, was born at Springfield, Ill., on October 15, 1874, and entered railroad service in 1891 as a machinist apprentice on the Wabash at Springfield. In 1901 he joined the Baltimore & Ohio as erecting and roundhouse foreman at Lorain, Ohio. Two years later he went with the Illinois Central in the same capacity at Paducah, Ky., and in 1909 he was promoted



**O. A. Garber**

to general foreman at Mounds, Ill., whence he was transferred to Paducah, where he remained until 1912, when he was promoted to master mechanic at East St. Louis, Ill. In 1918 Mr. Garber was transferred to Waterloo, Iowa, and later to Memphis, Tenn., where he served until March, 1925. At that time he was appointed mechanical superintendent of the Missouri Pacific, with headquarters at St. Louis. In September,



*Maintain*

**FULL Superheater Unit Area**  
**... by *preventing* Boiler Carryover**

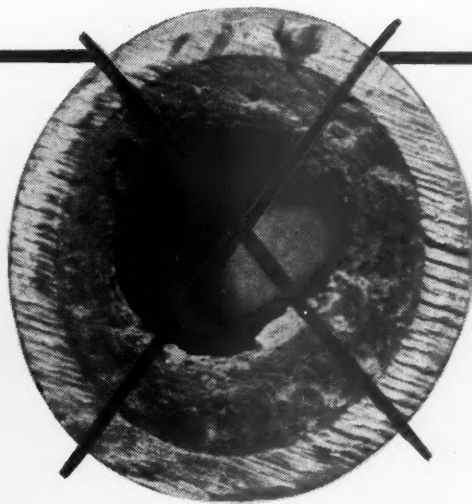
**This is most effectively accomplished**  
**with the *Elesco* Steam Dryer System**

**THE  
SUPERHEATER  
COMPANY**

Representative of AMERICAN THROTTLE COMPANY, INC.  
60 East 42nd Street, NEW YORK  
122 S. Michigan Ave., CHICAGO  
Montreal, Canada, THE SUPERHEATER COMPANY, LTD.

A-1878

(3020)



Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • American Throttles

August 16, 1947

1926, he was promoted to assistant chief mechanical officer, and one month later he was advanced to chief mechanical officer, the position he held at the time of his retirement.

**L. R. Christy**, whose promotion to chief mechanical officer of the Missouri Pacific, with headquarters at St. Louis, Mo., was reported in *Railway Age* of August 9, was born at Water Valley, Miss., on December 19, 1894, and entered railway service on the Illinois Central as a car repairer apprentice at Water Valley. In April, 1912, he was appointed car repairer, and later served as air brake repairer, car inspector, chief clerk, and traveling master car builder inspector. On June 9, 1916, he went with the Southern Pacific at Tucson, Ariz., as M. C. B. clerk, and until January 31, 1922, he alternately worked in various capacities in the mechanical department at Tucson and attended the University of



**L. R. Christy**

Arizona. Mr. Christy returned to the Illinois Central on February 3, 1922, as an air brake foreman at Memphis, Tenn., later being appointed rebuilding car foreman. On March 1, 1924, he went with the Missouri Pacific as assistant general car inspector, and a short time later was advanced to general car inspector. On February 16, 1926, he was promoted to master car builder of the Gulf Coast Lines and the International-Great Northern, with headquarters at Houston, Tex., where he served until February 28, 1941, when he was advanced to superintendent of the car department of the Missouri Pacific lines at St. Louis, the position he held at the time of his recent promotion.

**J. E. Brown**, superintendent of motive power of the St. Louis Southwestern, with headquarters at Pine Bluff, Ark., has retired after 46 years of service with the railroad. Born at Andover, Ill., on November 26, 1877, Mr. Brown began his railroad career with the Kansas City Southern in 1900. The following year he joined the Cotton Belt as chief draftsman at Pine Bluff, which position he held until 1916. At that time he was appointed mechanical engineer, in which position he served until 1918, when he entered military service. Mr. Brown returned to Pine Bluff at the end of the war, and was again appointed mechanical engineer. In 1923 he became assistant superintendent of motive power,

and in 1943 he was appointed superintendent of motive power.

## PURCHASES AND STORES

**C. B. Hanover**, whose promotion to purchasing agent of the Chicago, Milwaukee, St. Paul & Pacific, at Chicago, was reported in *Railway Age* of August 2, was born at Necedah, Wis., on September



**C. B. Hanover**

8, 1899, and entered the service of the Milwaukee in September, 1919, as a stock clerk at Tomah, Wis. In September, 1921, he became chief clerk to the storekeeper at Savanna, Ill., and in January, 1923, he was named chief clerk to the district storekeeper at Miles City, Mont. Mr. Hanover was appointed division storekeeper at Austin, Minn., in March, 1925, and served there until February, 1926, when he became chief clerk to the purchasing agent at Chicago. In April, 1938, he was promoted to assistant to the purchasing agent, and in 1946 he was advanced to assistant purchasing agent, the position he held at the time of his recent promotion.

**France Wood**, whose promotion to general storekeeper of the Chicago, Milwaukee, St. Paul & Pacific, at Milwaukee, Wis., was reported in *Railway Age* of August 2, was born at Mt. Carmel, Ill., on August



**France Wood**

24, 1899, and entered the service of the Milwaukee on June 1, 1919, as a clerk in the office of the district storekeeper at Deer Lodge, Mont. From 1922 to 1926 he

served as chief clerk at Deer Lodge, from 1926 to 1928 as storekeeper at Marmarth, N. D., and from 1928 to 1936 as storekeeper at LaCrosse, Wis. In 1936 he became supply train storekeeper, system, and in 1939 he was named traveling storekeeper, system. Mr. Wood was promoted to inspector of stores, system, in 1942, and on August 1, 1946, he was advanced to member of the president's committee, the position he held at the time of his recent promotion.

## SPECIAL

**Thomas J. Deegan, Jr.**, who has been serving as director of public relations of the Chesapeake & Ohio at New York, as noted in the *Railway Age* of August 9, was born in 1910 and was graduated from Fordham University in 1932. He served as a reporter on the staff of the New York Times for eight years and for four years



*Bachrach*

**Thomas J. Deegan, Jr.**

conducted his own public relations firm. In 1944 he became director of public relations of American Airlines and in January, 1946, he joined the Abbott Kimball Company as vice-president. During the war he served for two years as public relations aide to General Robert W. Johnson. Mr. Deegan joined Robert R. Young's staff in October 15, 1946, and, as reported in *Railway Age* of November 30, 1946, his appointment as director of public relations of the C. & O. lines was announced shortly thereafter.

## OBITUARY

**Almor Clarence Middleton**, general auditor of the Chicago, Rock Island & Pacific, at Chicago, died at St. Luke's hospital in that city on August 10, following a short illness. Mr. Middleton was born on October 7, 1878, at Modale, Iowa, and entered railroad service in 1898 as a car sealer with the Chicago & North Western at Missouri Valley, Iowa. He subsequently held various positions with the North Western, and in 1905 joined the Rock Island as traveling time accountant at Chicago. Advancing through several positions in that road's accounting department, Mr. Middleton became auditor of disbursements in 1928 and assistant general auditor in 1931. In May, 1941, he was promoted to general auditor, the position he held at the time of his death.

# Hunt-Spiller Double Seal Piston Rings —give you these

## 5 Cost Cutting Advantages

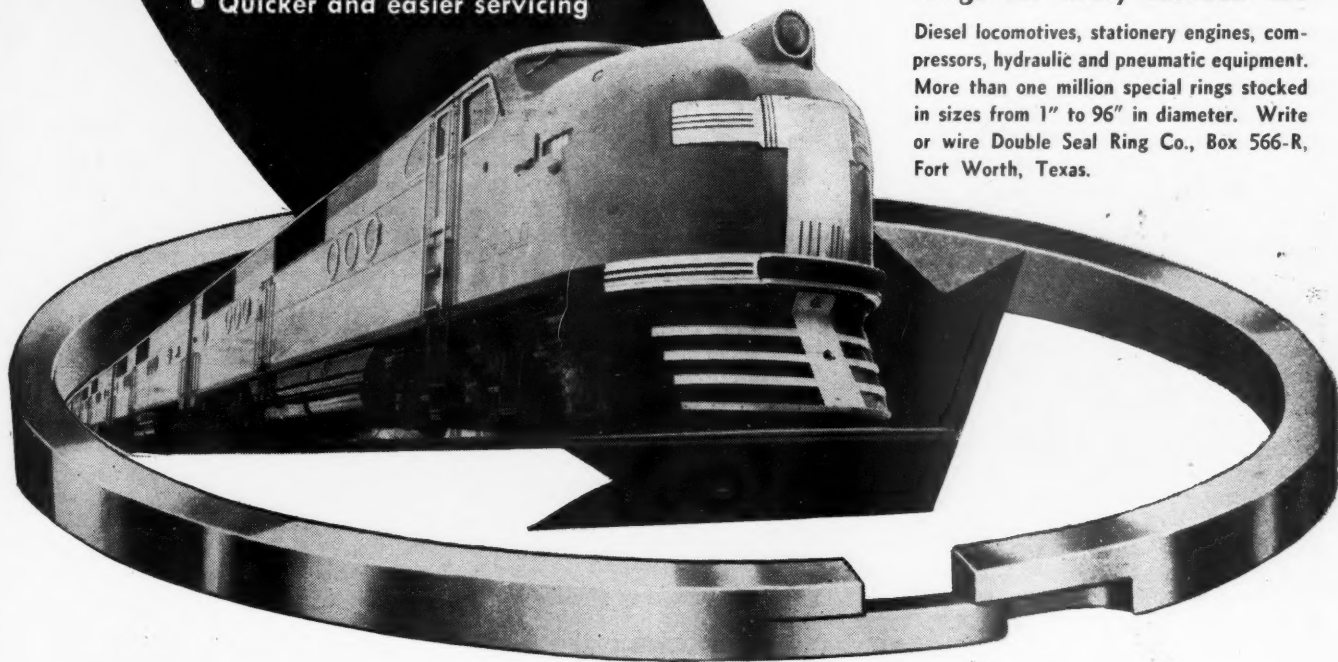
- More power per gallon of fuel
- Better lubrication with less lube oil consumed.
- Less ring and cylinder wear
- Longer service between overhauls
- Quicker and easier servicing

Only the *one piece* HS-DS ring gives the positive compression seal that stops blow-by, plus the rugged strength and simplicity of the plain ring. Double Seal compression rings in the *top grooves* of the piston (with plain or oil rings below) are *guaranteed* to increase power and reduce operating costs.

Made from HSGI Castings, . . . precision machined from Hunt-Spiller *Air Furnace* Gun Iron, with correct tension *cast* into the ring. The resulting lower wall pressures mean less wear, longer life for rings and cylinder liners.

### Rings for every railroad use

Diesel locomotives, stationery engines, compressors, hydraulic and pneumatic equipment. More than one million special rings stocked in sizes from 1" to 96" in diameter. Write or wire Double Seal Ring Co., Box 566-R, Fort Worth, Texas.



## HUNT-SPILLER MFG. CORPORATION

N. C. RAYMOND, President

E. J. FULLER, Vice-Pres. & Gen. Mgr.

383 Dorchester Ave. ★ South Boston 27, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 4050 Namur St., Montreal 16, P. Q.

Cylinder Bushings  
Cylinder Packing Rings  
Pistons or Piston Bull Rings  
Valve Bushings  
Valve Packing Rings  
Valve Bull Rings

Crosshead Shoes  
Hub Liners  
Shoes and Wedges  
Floating Rod Bushings  
Light Weight Valves  
Cylinder Liners and Pistons  
for Diesel Service

Dunbar Sectional Type Packing  
Duplex Sectional Type Packing  
for Cylinders and Valves  
(Duplex Springs for Above  
Sectional Packing)  
Cylinder Snap Rings  
Valve Rings, All Shapes

## General News

(Continued from page 73)

### Circus Movement by Rail Is 75 Years Old

The "Big Top" took to the rails just 75 years ago, the Association of American Railroads reveals. P. T. Barnum's "Greatest Show on Earth" became in 1872 the first circus in the modern sense to be transported by railroad in circus-owned cars.

In the summer of 1872, Barnum's show, which had previously been moved from place to place by teams of 600 horses, rolled out of winter quarters in a long train of brightly painted cars and began touring the country by rail. And where,

as previously, much time had been lost in traveling, all moves were now made by night and, for the first time, long hops from one important city to another were possible. Barnum prospered beyond expectations, and in time additional equipment was necessary to transport his huge show. Today, Ringling Brothers and Barnum & Bailey Combined Shows is normally moved by four trains totaling 101 cars—flats, stock cars and sleeping cars.

### Controllers Institute Elects

Joseph C. Huehn, comptroller of National Bearing Division of American Brake Shoe Company, has been elected president of the St. Louis Control of the Controllers Institute of America, the controllers' profes-

sional organization, which also named Joseph T. Mahaney, controller of Missouri-Kansas-Texas, a director.

J. V. Britt, assistant secretary-assistant treasurer of Unitcast Corporation, has been elected vice-president of the Toledo Control and Herbert W. Soderberg, comptroller of International Railway, was elected secretary of the Buffalo Control.

John V. Bowser, vice-president and comptroller of the Westinghouse Air Brake Company, Wilmerding, Pa., was accorded the post of director by the Pittsburgh Control of the institute. Grant E. Chessman, comptroller of the Elgin, Joliet & Eastern, was re-elected a director by the Chicago Control. Hugh J. Ward, assistant controller of Pennsylvania, was similarly re-elected a director by the Philadelphia Control.

### June Truck Traffic

Motor carriers reporting to the American Trucking Association transported in June 2,377,979 tons of freight, a decrease of 0.1 per cent under the 2,379,468 tons transported in May, but an increase of 12.7 per cent over the 2,109,341 tons hauled in June, 1946. The A. T. A. index figure, based on the 1938-40 average, was 196 for June, as compared with 193 for the previous month.

The June figures, according to the A. T. A., are based on comparable reports from 272 carriers in 42 states. Carriers in the Eastern district reported a tonnage decrease of 0.7 per cent below May, but an increase of 11.7 per cent over June, 1946; carriers in the Southern region reported a decrease of 0.6 per cent below May, but an increase of 10.4 per cent over June, 1946; and carriers in the Western district reported increases of 1.0 per cent and 15 per cent, respectively.

### Grain Rates from Idaho Cut

Having found as a result of an investigation instituted upon its own motion that rates on grain and grain products from a "delimited area" in southeastern Oregon, southern Idaho and northern Utah to California and to Puget Sound and Columbia River ports are unreasonable, the Interstate Commerce Commission has prescribed a new level of "reasonable" rates to be applied to such traffic. The commission's order in the No. 29335 proceeding requires the respondent railroads to establish new rates—which include reductions up to 11 cents per 100 lb.—before November 1.

The railroads affected by the order, to which Commissioner Mahaffie dissented in part, include the Union Pacific; Chicago, Milwaukee, St. Paul & Pacific; Great Northern; Northern Pacific; Pacific Electric; Southern Pacific; Spokane, Portland & Seattle; Utah Idaho Central; Bamberger; Sacramento Northern; Denver & Rio Grande Western; Western Pacific; Northwestern Pacific; and the Atchison, Topeka & Santa Fe. Commissioner Mahaffie said that while he agreed with that part of the report that requires a closer alignment and a better relation of the rates considered, he does not agree with the finding that the present rates are un-

**WEDGY SAYS**

**"GHL is an Ol' Timer on any Railroad anywhere!"**

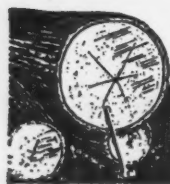


"Yes sir, when it comes to railroads and railroad materials GHL is an ol' timer. We know from experience how exacting railroad material specifications can be—that it takes a tremendous lot of top-grade know-how and supervision to supply the huge and exacting railroad demand for lumber and timber products.

"GHL's Railroad Materials Department has been providing America's railroad needs for two decades . . . including the critical war period. Over the years they have found GHL a prompt, dependable source of supply.

"GHL quality products and service are as nearby as your telephone."

*Wedgy*

Southern Pine, Southern and Appalachian Hardwoods, Cypress and Pacific Coast Woods  
Band Mills and Associated Mills Throughout the South and on the Pacific Coast

**GEORGIA HARDWOOD LUMBER COMPANY**  
Leaders in World-Wide Distribution of Lumber

General Office Augusta, Ga. Division Offices New York, Washington, Houston, Portland  
And in Other Principal Cities Throughout the World

named  
Missouri-  
assistant  
has been  
Control  
roller of  
secretary  
ent and  
ir Brake  
accorded  
gh Con-  
nessman,  
Eastern,  
Chicago  
nt con-  
arly re-  
delphia

Ameri-  
ported in  
decrease  
68 tons  
ease of  
41 tons  
A. index  
ge, was  
193 for

to the  
reports  
Carriers  
tonnage  
ay, but  
r June,  
rior re-  
below  
ent over  
Western  
er cent

Cut  
investi-  
on that  
from a  
Oregon,  
tah to  
nd Co-  
ole, the  
as pre-  
" rates  
e com-  
proceed-  
ads to  
reduc-  
-before

der, to  
nted in  
hicago,  
Great  
e Elec-  
ortland  
Bam-  
ver &  
Pacifi-  
chison,  
r Ma-  
h that  
closer  
of the  
e with  
re un-

reasonable to the extent found. "Some of the reductions required are drastic—more than necessary to effect proper relation between the rate territories in question," he said.

### June Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for June and for this year's first six months. The compilation, which is subject to revision, follows:

Item	Month of June		6 months ended with June	
	1947	1946	1947	1946
Number of train accidents*	1,260	1,277	8,404	7,282
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed .....	169	148	631	670
Injured .....	130	106	530	489
Passengers on trains:				
(a) In train accidents*				
Killed .....	84	27	332	341
Injured .....	6	2	21	26
(b) In train-service accidents				
Killed .....	220	240	1,284	1,329
Travelers not on trains:				
Killed .....	1	1	6	8
Injured .....	67	63	467	502
Employees on duty:				
Killed .....	64	48	395	326
Injured .....	2,888	2,927	17,941	18,738
All other nontrespassers**				
Killed .....	110	145	1,008	1,016
Injured .....	469	430	3,368	3,336
Total—All classes of persons:				
Killed .....	350	344	2,094	2,092
Injured .....	3,858	3,793	24,322	25,235

\* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than \$150 to railway property.

\*\* Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:


Persons:				
Killed .....	87	113	919	936
Injured .....	235	248	2,088	2,165


### Transportation Corps Observes Fifth Anniversary

Asserting that "the problems of transportation in this post-war era of world-wide adjustment are many and complex," Major General Edmond H. Leavey, Chief of Transportation, United States Army, declared last week that "the demands upon every member of the transportation team are such as not to permit us to relax our vigilance or our initiative and drive in executing our assigned tasks." General Leavey's statement was made in connection with the observance on July 31 of the fifth anniversary of the Army's Transportation Corps.


"The Corps was organized on July 31, 1942, to provide an integrated transport service for the personnel, arms and supplies of the Army," General Leavey said. "It was organized in time of war when the Army was building toward its greatest strength and was engaging in or preparing to mount campaigns reaching to the most remote territories of the world. The contribution of the Transportation Corps to the victory won is now history and we are justly proud of our record."

According to the War Department, the







RAILWAY CARS




SHIPS



AIRCRAFT



TRUCKS



BUSES

Inner-Seal keeps out dirt and dampness — keeps heat or cold in or out.

Inner-Seal makes doors and hatches water and weather tight; protects cargo and interiors.

Inner-Seal protects against temperature and pressure variations; reduces noise for passenger comfort.


Inner-Seal eliminates rattles; assures safe transport of perishables.

Inner-Seal insures dust-free, weather-proof, comfortable interiors.

**the ideal insulating seal for railway car installations**

Bridgeport Inner-Seal, the ideal insulating seal, effectively and economically protects against weather, moisture and dirt. Its unique design and rugged construction make it, at the same time, the strongest and most flexible weather stripping for industrial applications. Live sponge rubber that makes a tight, contour-conforming seal is molded, for life, onto tough spring wire to provide unequalled flexibility for fitting sharp corners and compound curves. Inner-Seal has been proved by years of use in aircraft, railway cars, trucks, busses, ships and commercial refrigerators.

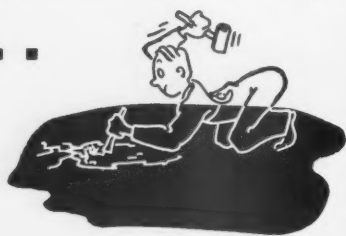
Inner-Seal is manufactured in many standard sizes and colors for immediate delivery, or may be specially designed to meet unusual applications. Write for complete information and samples.



BRIDGEPORT 1, CONN.  
Est. 1837

**★ TOUGH STEEL SPRING WIRE MOLDED INTO LIVE SPONGE RUBBER**

**There's no  
need  
to  
rip  
up  
your old floor**



**Stonhard Resurfacer** makes repairs to wood or concrete floors easy. Your handy man can quickly install **Stonhard Resurfacer** at a thickness of only 1/2" right over the old, worn floor surface.

Floors resurfaced with **Stonhard** are warm, dry and resilient. Under traffic, **Stonhard** compacts and improves with each year of service.

**SEND FOR FREE  
48 PAGE BOOKLET**

"Over the Rough Spots", a valuable informative guide to better building maintenance, yours for the asking ... return the coupon.

## STONHARD COMPANY

Building Maintenance Materials  
Serving Industry Since 1922  
881 Terminal Commerce Bldg.  
Philadelphia 8, Pa.

**STONHARD COMPANY**  
881 Terminal Commerce Bldg.  
Philadelphia 8, Pa.

Send us information about STONHARD RESURFACER and a free copy of "Over the Rough Spots."

Firm .....  
Mr. .... Title .....  
Address .....  
City ..... Zone ..... State .....

Army supervised the shipment overseas of 146,011,200 measured tons of dry cargo between December, 1941, and June, 1947, inclusive, while dry cargo received in the U. S. by the Army during the same period amounted to 17,845,000 measured tons. Civilian supply sent overseas by the Army from January, 1946, through June, 1947, totaled 7,740,000 measured tons, the peak month being June, 1947, with a total of 1,052,000 measured tons.

It also was pointed out that in June, 1947, 1,485,000 measured tons of civilian supply shipments were sent abroad, the highest amount since January, 1946, the War Department's statement adding that

since February, 1946, each month's load has been at least 100,000 measured tons higher than the previous month.

The War Department also lauded the "outstanding record" of the Transportation Corps—the personnel of which has been reduced from 189,000 in June, 1945, to 41,000 in June, 1947—in its other activities, including its handling of requests for individual and small group travel, consolidation of carload lots, return of troops and other passengers from overseas, release of railway cars, settling of claims for the transportation of dependents, return of war brides and the movements of dependents overseas.

## Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 128 reports (Form IBS) representing 132 steam railways  
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways			
	For the month of May		For the five months of	
	1947	1946	1947	1946
1. Net railway operating income	\$75,728,897	*\$4,553,086	\$308,234,436	\$116,937,639
2. Other income	13,889,333	13,789,585	75,041,465	69,213,777
3. Total income	89,618,230	9,236,499	383,275,901	186,151,416
4. Miscellaneous deductions from income	2,845,483	1,508,021	15,805,501	11,127,065
5. Income available for fixed charges	86,772,747	7,728,478	367,470,400	175,024,351
6. Fixed charges:				
6-01. Rent for leased roads and equipment	10,638,194	9,791,067	53,207,866	47,479,346
6-02. Interest deductions <sup>1</sup>	25,756,315	30,633,802	129,419,676	147,753,543
6-03. Other deductions	162,274	128,404	711,791	601,802
6-04. Total fixed charges	36,556,783	40,553,273	183,339,333	195,834,691
7. Income after fixed charges	50,215,964	*32,824,795	184,131,067	*20,810,340
8. Contingent charges	3,855,769	3,203,893	17,558,108	15,737,380
9. Net income <sup>2</sup>	46,360,195	*36,028,688	166,572,959	*36,547,720
10. Depreciation (Way and structures and Equipment)	29,428,480	28,689,963	145,776,862	142,234,848
11. Amortization of defense projects	1,356,675	757,614	6,763,305	3,096,380
12. Federal income taxes	25,230,787	*8,036,390	123,352,616	9,226,737
13. Dividend appropriations:				
13-01. On common stock	21,454,573	22,186,935	58,963,693	67,050,641
13-02. On preferred stock	5,296,643	4,027,041	16,805,916	19,601,181
Ratio of income to fixed charges (Item 5÷6-04)	2.37	0.19	2.00	0.89

Selected Asset and Liability Items	All Class I Railways	
	Balance at end of May	
	1947	1946
17. Expenditures (gross) for additions and betterments—Road	\$93,498,090	\$83,506,889
18. Expenditures (gross) for additions and betterments—Equipment	187,362,174	91,241,189
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	575,560,927	588,928,155
20. Other unadjusted debits	181,381,449	174,098,872
21. Cash	1,034,574,111	1,045,336,659
22. Temporary cash investments	943,122,271	1,369,590,826
23. Special deposits	134,465,027	199,625,826
24. Loans and bills receivable	192,024	476,239
25. Traffic and car-service balances—Dr.	50,134,281	35,646,537
26. Net balance receivable from agents and conductors	128,969,376	88,834,168
27. Miscellaneous accounts receivable	290,354,894	365,765,244
28. Materials and supplies	727,306,795	608,839,753
29. Interest and dividends receivable	19,872,315	27,553,950
30. Accrued accounts receivable	143,386,844	195,358,336
31. Other current assets	42,844,891	31,958,770
32. Total current assets (items 21 to 31)	3,515,222,829	3,968,986,328
40. Funded debt maturing within 6 months <sup>3</sup>	148,495,761	128,237,165
41. Loans and bills payable	4,250,000	10,854,058
42. Traffic and car-service balances—Cr.	92,380,232	104,441,163
43. Audited accounts and wages payable	511,274,190	516,443,407
44. Miscellaneous accounts payable	195,739,197	158,450,731
45. Interest matured unpaid	44,708,452	50,515,568
46. Dividends matured unpaid	8,211,389	8,779,878
47. Unmatured interest accrued	61,956,038	58,764,429
48. Unmatured dividends declared	40,339,235	39,703,490
49. Accrued accounts payable	166,337,843	226,502,969
50. Taxes accrued	481,129,763	672,160,124
51. Other current liabilities	87,950,203	148,832,548
52. Total current liabilities (items 41 to 51)	1,694,276,542	1,995,448,305
53. Analysis of taxes accrued:		
53-01. U. S. Government taxes	353,228,892	542,604,372
53-02. Other than U. S. Government taxes	127,900,871	129,555,752
54. Other unadjusted credits	361,477,210	396,019,793

<sup>1</sup> Represents accruals, including the amount in default.

<sup>2</sup> After a deduction of \$234,412, taken out of operating revenues to create reserves for land grant deductions in dispute.

<sup>3</sup> Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

\* Decrease, deficit, or other reverse item.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.